

NOVEMBER, 1961



AMATEUR RADIO
AMATEUR RADIO
AMATEUR RADIO
AMATEUR RADIO

RADIO
RADIO
RADIO
RADIO
RADIO
RADIO
RADIO
RADIO



Senator Hannan (top centre) opening the Twelfth Victorian State Convention. He is surrounded by scenes taken at Ferny Creek Picnic Ground. See story, page 19.

2/-

Registered at G.P.O. Melbourne, for
transmission by post as a periodical

AMATEUR RADIO

"HAM" RADIO SUPPLIERS

(KEN MILLBOURN, PROP.)

5A MELVILLE STREET, HAWTHORN, VICTORIA

North Balwyn Tram Passes Corner.

Phone 86-6465

Money Orders and Postal Notes payable North Hawthorn P.O. Packing Charge on all goods over 10 lbs. in weight, 5/- extra.

SCR522 TRANSCEIVERS

Clean condition. Complete with valves. 5/- handling charge. **£5**
Modified Units, complete with 832s. Few only left at **£7½**
Receivers only, incomplete, but ideal for wrecking. To clear **19/6**

NEW TAPE DECKS

"Collaro" Studio Type, Model BM-2. Three Speed. Price **£31/8/4**.
Collaro "Studio" Stereo Tape Decks. Price **£37/5/-**.

VARIABLE CONDENSERS

(Ceramic)
Small screwdriver adjust, 80 pF., 7/6 each, or three for **£1**.
Split stator two gang, 60 pF. per sec., medium size, 15/- ea.
Trimmers, Ducon, 4-30 pF., 3/6 ea.
Phillips air trimmers, 3-30 pF., 3/- ea.
Compression trimmers, c.t. 3-55, 1/- ea.

TECH MULTIMETER

300 μ A. movement.
AC and DC voltages:
0-10, 0-50, 0-250, 0-500, 0-1000V.
Current ranges (mA):
0-1, 0-100, 0-500 mA.
Ohms range: 0-100,000 ohms.
Size: 3½ x 2½ x 1¼ inches.
Complete with leads.
Price only **£2/17/6**, post paid.

CO-AXIAL CABLE

100 ohm co-ax. cable, ¾" diam., 2/- yd.
98 ohm co-ax. cable, ¾" diam., in 100 yard rolls **£5**, or 1/3 yard.
72 ohm PT29M, single strand, ¾" diam. 2/- yd.
50 ohm co-ax. cable, ½" diam., 2/- yard

CONDENSERS

Superseal Paper Type:

0.005 μ F. 600V. 0.0033 μ F. 600V.
0.022 μ F. 600V. 0.04 μ F. 200V.
0.047 μ F. 1000V. 0.015 μ F. 400V.
0.0047 μ F. 400V. 0.001 μ F. 1000V.

Metalpak Electrolytic Type:

25 μ F. 25V.d.c.w. 2 μ F. 150V.d.c.w.
2 μ F. 200V.d.c.w. 2 μ F. 250V.d.c.w.
and others.

All 6d. each

FERROCART VACUUM TUBE VOLTMETER

V.T.V.M. **£19/17/6** inc. tax
H.V. Probe **£3/5/0** inc. tax
R.F. Probe **£2/10/0** inc. tax

VALVES

1A3 2/-	6X5 10/-
1A7GT 7/6 3a £1	7A5 2/- 11a £1
1C7 3/- 7a £1	7B5 7/6
1D5GT 5/- 5a £1	7C5 5/- 5a £1
1D8 7/6 3a £1	7C7 2/- 12a £1
1H5 5/- 5a £1	7W7 2/6 10a £1
1H6 5/- 5a £1	7E6 3/6 7a £1
1K4 5/- 5a £1	12A6 4/- 6a £1
1K5 5/- 5a £1	12A7GT 10/-
1K7 5/- 5a £1	12A17 5/- 5a £1
1N5 5/- 5a £1	12C8 5/-
1P5 2/- 10a £1	12J5 5/- 5a £1
1Q5 5/- 5a £1	12K6 5/- 5a £1
1S5 10/-	12SF7 5/- 5a £1
2X2 5/- 5a £1	12SG7 5/- 5a £1
3A4 10/-	12SK7 5/- 5a £1
3AP1 32/-	12SL7 7/6 3a £1
3BP1 45/-	12SK7 5/- 5a £1
3Q5 5/- 5a £1	14A7 3/6 7a £1
5Y4GY £1	25L6 5/-
5Y3GT 13/6	117Z6 5/- 5a £1
3Z3 17/6	1625 5/- 5a £1
6A3 7/6 3a £1	30 1/3
6A7 10/-	35T 30/-
6AJ5 7/6 3a £1	717A 7/6
6AG7 12/6	807 7/6 3a £1
6AM5 (EL91) 10/-	808 £1
6AM6 (EF91) 10/-	815 15/-
6B4 10/-	830B 15/-
6B7 10/-	832A 19/6
6BE6 12/6	954 5/- 5a £1
6C4 5/- 5a £1	955 5/- 5a £1
6C5 5/- 5a £1	956 5/- 5a £1
6C6 5/- 5a £1	958A 2/6 10a £1
6D6 5/- 5a £1	9003 7/6 3a £1
6E5 5/- 5a £1	AV11 2/11
6G6 7/6 3a £1	EA50 2/- 10a £1
6G8G 17/6	EF36 5/- 5a £1
6J6 10/-	EF39 5/- 5a £1
6K7 5/- 5a £1	QE04/10 15/-
6K8G 20/-	QV04/7 15/-
6L7 5/- 5a £1	RL18 7/6 3a £1
6R7 7/6 3a £1	UL41 7/6 3a £1
6T7 7/6 3a £1	VR53 5/- 5a £1
6Z7 7/6 3a £1	VR101 5/- 5a £1
6SC7 7/6	VR102 5/- 5a £1
6SF5 7/6 3a £1	VR103 5/- 5a £1
6SF7 7/6 3a £1	VR136 2/- 12a £1
6SG7 12/6	VR150 12/6
6SH7 4/- 5a £1	VT52 5/-
6SK7GT 12/6	VT127 4/11 5a £1
6SQ7 12/6	VT501 7/6 3a £1
6SS7 7/6 3a £1	

NEW VALVES—Just Arrived

1R5 16/4	6BX6 15/1
3V4 15/5	6BZ6 15/2
6AE8 17/3	6CW7 16/9
6AL5 13/7	6K7 met. 5/- 5a £1
6AN7 17/3	6N8 15/5
6AU6 15/1	6SL7 12/6
6AV6 13/-	6SN7 12/6
6BE6 15/2	6V4 11/4
6BL6 16/6	6Y6 5/- 5a £1
6BM8 17/8	805 £3

OVAL SPEAKERS

Oval Type, Well Known Make.
60H 6" x 9" 3.5 ohm voice coil, 37/6
75H 5" x 7" 3.5 ohm voice coil, 32/6
5000 and 7000 ohm Trannies to suit, 15/-

BC433-G COMPASS RECEIVERS
Freq. range 200 Kc. to 1750 Kc., 14 valves—6a volt series, 6K7, 6J5, etc. I.F. freq. 142.5 Kc. Clean condition. Priced only **£10/0/0**.
Flexible cable & control box 30/- extra.

JAPANESE METERS

0-1 mA., 3½" round, MR-65 **£1/15/0**

PIEZO CRYSTAL MICROPHONE

Price only **57/6**
Stand to suit 15/- extra.
Model BM3 (illustrated). Response 100 to 8000 c.p.s., fitted with 6 ft. cable and phone plug with on-off switch. Can be used on stand for hand use.

COMMAND TRANSMITTERS

3-4 Mc. range **£7**
4-5.3 Mc. **£3**
7-9 Mc. **£6**

OA79 and OA81 DIODES

Well known make. Brand New.
To Clear—2/6 each

LEADER LSG10 SIGNAL GEN.

Freq. range six bands: 120 Kc. to 120 Mc. on fundamentals, 120 to 260 Mc. on harmonics. B.I. output: over 100,000 microvolts. Mod. freq. approx. 400 c.p.s. B.I. output: 1 to 3v. A.I. output: approx. 4 v. Tubes: 12BH7, 6AR5. Power supply a.c. 50-60 c.p.s. 115 or 220V. Size: 6½ in. x 10 in. x 4½ in. Weight: 1½ lb.
Price **£13/17/6** inc. tax.

POWER TRANSFORMERS

410 volts aside, 80 mA., 12.8v. at 1.25a., 5v. at 2a. **40/-**.

STEP-DOWN TRANSFORMERS

230 volts to 110 volts, 1kw., **£10/0/0**.
230 volts to 110 volts, 500w., **£6/10/0**.
In case.

5.5 Mc. VIDEO COILS

Contains slug-tuned coil former.
6d. each.

All parcels sent ordinary post unless otherwise stated.

AMATEUR RADIO

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

EDITOR:

K. M. COCKING, VK3ZPQ.

PUBLICATIONS COMMITTEE:

G. W. BATTY, VK3AOM.
S. T. CLARK, VK3ASC.
R. S. FISHER, VK3OM.
R. W. HIGGINBOTHAM, VK3RN.
E. C. MANIFOLD, VK3EM.
A. ROUDIE, VK3UJ.
J. VAILE, VK3PZ.
L. T. WHITE, VK3ZEW (Cartoons)

ADVERTISING REPRESENTATIVE:

C/o P.O. Box 36, East Melbourne,
C.2, Vic.

PRINTERS:

"RICHMOND CHRONICLE,"
Shakespeare St., Richmond, E.1.
Telephone: 42-2419.

MSS. and Magazine Correspondence

should be forwarded to the Editor,
P.O. BOX 36,
EAST MELBOURNE, C.2, VIC.,
on or before the 8th of each month.

Subscription rate, in Australia and
Overseas, is 24/- per annum, in
advance (post paid).

Wireless Institute of Australia
(Victorian Division) Rooms' Phone
Number is 67-3084 (temporary), 10
a.m. to 4 p.m. only.

WI BROADCASTS

All Amateurs are urged to keep these
frequencies clear during, and for a period
of 15 minutes after, the official Broadcasts:

VK1WI: Sundays, 1100 hours EST, simultane-
ously on 3575 Kc., 7140 Kc., and 1459
Mc. Intrastate call-backs taken on 7050
Kc..

VK3WI: Sundays, 1030 hours EST, simultane-
ously on 3575 and 7140 Kc., 6108 and
14525 Mc. Intrastate hook-ups taken on
7135 Kc. Individual frequency checks
of Amateur Stations given when VK3WI
is on the air.

VK4WI: Sundays, 0900 hours EST, simultane-
ously on 7140 Kc. and 14342 Mc.
Intrastate hook-ups taken on 7105 Kc.

VK5WI: Sundays, 0900 hours CAT, on 7145
Kc. Intrastate hook-ups taken on 7125
Kc. Frequency checks given when VK-
5WI is on the air and also by VK5MD
by arrangement.

VK6WI: Sundays at 0930 hours WAST, on
7145 Kc. Intrastate hook-ups taken on
7085 Kc.

VK7WI: Sundays at 1000 hours EST, on 7145
Kc. and 3612 Kc. Intrastate hook-ups
taken on 7115 Kc.

Published by the Wireless Institute of Australia, Victorian Division,
Reg. Office: 62a Franklin Street, Melbourne.

Temporary Office: 262 Queen Street, Melbourne. Phone 67-3084.

Postal Address: P.O. Box 36, East Melbourne, C.2, Vic.

EDITORIAL



MORSE CODE AND THE LIMITED LICENCE

From time to time the same ques-
tion comes up: "Why do we have a
Morse Code requirement in these
days of advanced techniques?"

Ignoring the pros and cons, the
Regulations laid down by the Inter-
national Telecommunication and
Radio Conferences are quite clear in
this regard concerning stations in
the Amateur Service. Regulation
1003 3 (1) states "Any person oper-
ating the apparatus in an amateur
station must have proved that he is
able to transmit, and to receive by
ear, texts in Morse Code signals.
Administrations concerned may, how-
ever, waive this requirement in the
case of stations making use exclu-
sively of frequencies above 1,000
(one thousand) Mc." Our authori-
ties, in their wisdom, varied the
requirement in respect to 1,000 Mc.,
in the conditions laid down for our
Limited Licence, by making 144 Mc.
the frequency limit.

Regulation 1006 5 (1) under Article
42 is also significant. It reads "All
the general rules of the Convention
and of the present Regulations shall
apply to Amateur Stations . . ."
Read this in conjunction with Article
45 1: "Radio stations shall be obliged
to accept, with absolute priority,
distress calls and messages regard-
less of their origin, to reply in the
same manner to such messages, and
immediately to take such action in
regard thereto as may be required",
and we have one logical reason for
the Morse Code requirement.

When war commenced in 1939, the
Amateur's ability as an operator was
very quickly recognised by the var-
ious Armed Forces. In the early
months of the war, the loading of
traffic increased much more rapidly
than the facilities to train operators.
It was during this time that Amate-
urs literally came to the rescue and
manned watches with the minimum
of training required to make them
familiar with procedure. They were
manning circuits where in most
cases, the operator at the other end
had passed a course of intensive
training where the requirements were
much higher than the Amateur Oper-
ator's Certificate of Proficiency. He
did the job because he had not been
content to rest on his laurels after
getting his ticket. He lived up to
the traditions of the Amateur Ser-
vice: A service of self training, inter-
communications and technical in-
vestigations carried on by Amateurs,
that is, by duly authorised persons
interested in radio technique solely
with a personal aim and without
pecuniary interest.

Although many sound reasons
could be advanced for eliminating
the present Morse Code requirement,
while existing regulations are in
force we are required to abide by
them. At the same time, newcomers
to our ranks, by maintaining this
tradition and becoming fully convers-
ant with all the techniques, will get
far greater satisfaction from partici-
pating in the Amateur Service and
meeting other members on common
ground.

W.I.A. FEDERAL EXECUTIVE.

THE CONTENTS

P.M.G. Announces Government Agreement to R.F.A.R.C. Recommendations	3
The Varney (G5RV) Multiband Antenna	4
Official V.h.f. Records in Australia	4
Ross Hull Memorial V.h.f. Contest, 1961-62	5
VK-ZL DX Contest, 1960, Results	9
The Elizabethan Award	9

Book Review:	
"The Surplus Handbook"	8
"V.h.f. for the Radio Amateur"	8
Sixth Elizabeth Birthday Celebrations	9
Correspondence	13
DX	11
Notes	16
Sideband	15
SWL	14
VHF	13

P.M.G. ANNOUNCES GOVERNMENT AGREEMENT TO R.F.A.R.C. RECOMMENDATIONS

The recommendations of the Radio Frequency Allocation Review Committee have been presented to and accepted in their entirety by the Government, the Postmaster-General, Hon. C. W. Davidson, O.B.E., announced on Thursday, 12th October, 1961.

The Radio Frequency Allocation Review Committee (R.F.A.R.C.) was an Ad Hoc Committee formed in August 1960 by the Postmaster-General to review the allocation of frequency channels for all Australian transmitting services in the light of the results of the Geneva 1959 Conference of the International Telecommunications Union.

Chaired by Professor L. G. Huxley, Professor of Physics, National University, Canberra, the Committee represented the major frequency users, its members of reference entailing a complete examination of the existing proposed frequency table arising from and prior to the Geneva 1959 Conference of the I.T.U., and the manner by which any further distribution of frequencies could be made in the National interest whilst at the same time endeavouring to meet the requests of all frequency users.

The report of the R.F.A.R.C. was the culmination of twelve months arduous work from August 1960 until its final meeting in May 1961.

Representatives of all the major frequency users, including the Wireless Institute of Australia, enjoyed full rights on the Committee and during the period it sat the Committee overlooked no one and set about providing the best for everyone. As far as the Wireless Institute is concerned, it commends the fine effort put up by this group of people who operated in the National interest, backed by the technical know-how and experience from all sections of the communications services of the Commonwealth of Australia.

Undoubtedly there will always be some who are not satisfied with the outcome of this committee's findings, but these few must be reminded that every Service lost some ground at the expense of the many new Services which appeared as an outcome of Geneva and the injection of these Services brought many new requirements into portions of the frequency spectrum. Every Amateur in Australia can rest assured that the Amateur representative had an equal say with all the other Services, and the Wireless Institute of Australia was very fortunate to have a member of the calibre of Mr. Arthur Tinkler, VK3ZV, on the committee.

The frequency spectrum from 10 Kc. to 40 Gc. was examined and many changes were made throughout these frequencies from those that had been agreed at Geneva. It is not proposed to delve into the report in detail except where it affects the Amateur Service in Australia. The frequencies for the Amateur Service in Australia are shown in the Table in three sections—the frequencies applying in Australia after Atlantic City (1947), the frequencies

agreed for Australia in Geneva (1959), and the recommended frequencies from the findings of the R.F.A.R.C. Footnotes have been appended at the foot of the Table giving more detail on any special conditions applying to a particular frequency band.

As there are several references in the Table to the Amateur Service being a Secondary Service in certain bands, it should be clearly understood what this term implies. Stations in a Secondary Service shall not cause harmful interference to stations of the Primary Service to which frequencies have already been assigned or may be assigned in the future; they cannot claim protection from harmful interference from stations of the Primary Service, but can claim protection from other stations in another Secondary Service who may be assigned the same frequencies.

TABLE OF PROPOSED FREQUENCIES ON NEXT PAGE

In addition to examining the frequency spectrum from 10 Kc. to 40 Gc., the committee made other recommendations to the Minister as an outcome of their deliberations. Two of these additional proposals are of particular interest to the Amateur Service in Australia.

- The first relates to the protection of frequency users in marginal receptional areas. The committee noted that there have been instances where users of properly assigned and used frequencies have been required to change frequency or close down to protect t.v. reception of low signal strength and therefore recommended that the assigning authority be directed to support any user who conforms to the official requirements for his service and placed the onus of satisfactory reception of signals on the individual receiver.
- The second, and more important, recommendation affecting the Amateurs was in relation to the setting up of a similar committee to the R.F.A.R.C. Ad Hoc Committee, to be convened as directed by the P.M.G. to act in the National interest and work in concert with the assigning authority on frequency matters assigned to it by the P.M.G. This new committee was proposed to meet before and after I.T.U. Conferences and to deal with any other matters referred by the Minister.

The position may be summarised as follows. The Amateur Service has gained a few extra frequencies over those allocated at Geneva, and have in addition, saved other frequencies which would not have been international allocations for Amateurs, e.g. the 52-54 Mc. band and the 144-148 Mc. band, which would have moved some time

in the future. As previously mentioned, some frequencies have been lost but the Amateur is not alone in this regard and we are now better off in certain frequencies, e.g. the 7 Mc. band, than our European contemporaries.

There has been some speculation about the compulsory use of single sideband phone techniques by Amateur Stations in their bands after 1970. Let it be said that this committee made no such recommendation in relation to the Amateur Service. They did, however, make a recommendation on the use of single sideband transmissions on frequencies between 1605 Kc. and 30 Mc., but this was an extension of the Geneva recommendation aimed at the Fixed and Maritime Mobile Services which now use or were proposing to use double sideband transmissions. It seems very likely, in any case, that the Amateur Service, by January 1970, for its own convenience, may be primarily using this type of emission.

There are several points which have not been enumerated in the above explanation, but these points will all be covered in detail in the Geneva Story which will be printed and issued to every Australian Amateur.

It must be repeated that although the Government has accepted the proposals of the R.F.A.R.C., the present allocation of frequencies will apply until official notification is received from the Postmaster-General's Department.

W.I.A. FEDERAL EXECUTIVE.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose calls have been amended will also be shown.

PHONE

Call	Scr. Cnt- No. ries	Call	Scr. Cnt- No. ries
VK8RU	2 296	VK6KW	4 209
VK5AB	49 356	VK3ATN	26 294
VK6MK	43 350	VK4HR	13 182
VK3AHO	51 320	VK4RW	23 184
VK4PJ	21 221	VK3BZ	3 176
VK3WL	14 211	VK3GB	50 171

New Member:
VK3EM 54 151

C.W.

Call	Scr. Cnt- No. ries	Call	Scr. Cnt- No. ries
VK3JKB	10 282	VK4HR	8 218
VK3CK	26 282	VK8RU	11 215
VK4PJ	29 284	VK3XU	48 213
VK3NC	19 248	VK7LZ	17 212
VK3BZ	15 226	VK3VJ	39 211
VK3BZ	8 222	VK3KX	41 208

Amendment:
VK3ARX 66 183

OPEN

Call	Scr. Cnt- No. ries	Call	Scr. Cnt- No. ries
VK3ACK	8 288	VK4HR	7 259
VK8RU	8 271	VK3AHO	76 232
VK4PJ	32 267	VK3BZ	4 251
VK6MK	74 254	VK3A	43 229
VK3NC	77 250	VK3WL	45 225
VK3HG	3 241	VK7LZ	23 223

Page 4

ROSS HULL MEMORIAL V.H.F. CONTEST, 1961-62

The Federal Contest Committee of the Wireless Institute of Australia invites all Australian and Overseas Amateurs and Short Wave Listeners to participate in this annual contest which is held to perpetuate the memory of the late Ross Hull whose interest in v.h.f. did much to advance the art.

A handsome Perpetual Trophy is awarded annually for competition between members of the W.I.A. in Australia and its Territories inscribed with the name and life work of the man whom it honours. The name of the winning member of the W.I.A. each year is also inscribed on the Trophy. In addition, this member will receive a suitably inscribed, framed photograph of the Trophy.

Objects: Amateurs in each VK Call Area will endeavour to contact Amateurs in other Australian Call Areas and Overseas.

Date of Contest: 16th December, 1961, to 14th January, 1962.

Duration: From 0001 hours E.A.S.T. (1401 hours G.M.T.) on 16/12/61 and 15/12/61 respectively, to 2359 hours (1359 G.M.T.) on 14/1/62.

RULES

1. There shall be three main sections to the Contest:

- Transmitting, Open, 50 Mc. and higher.
- Transmitting, Phone, 50 Mc. and higher.
- Receiving, Open, all bands, 50 Mc. and higher.

2. All Australian and Overseas Amateurs may enter for the Contest whether their stations are fixed, portable or mobile.

3. All Amateur v.h.f. bands may be used, but no cross-band operating is permitted, with the exception that the 50-54 Mc. and 56-60 Mc. bands will be considered to be the same band for contacts.

4. Amateurs may enter for any one of the transmitting sections. All contacts must be consecutively numbered in the one number sequence to facilitate checking.

5. Only one contact per band per station is allowed each calendar day.

6. Only one licensed Amateur is permitted to operate any one station under the owner's call sign. Should two or more operate any particular station, each will be considered a contestant and must submit a separate log under his own call sign.

7. Entrants must operate within the terms of their licences.

8. **Cyphers:** Before points may be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of 5 or 6 figures will be made up of the RS (telephony) or RST (c.w.) report, plus three figures commencing from 001 for the first contact and will increase in value by one for each successive contact. If any contestant reaches 999 he will start again with 001.

9. **Entrants** must be set out as shown in the example, using only one side of the paper. Entries must be postmarked not later than one month after the Contest (i.e. not later than 14/2/62) and addressed to the Federal Contest Committee, W.I.A., Box 851J, G.P.O., Hobart, Tasmania.

10. **Scoring** for all sections will be based on the attached table. Contestants will have to agree between themselves as to the distance between their stations. Such distances must be shown in their log entry in the column usually used for remarks or bonus points.

11. **Logs:** All logs shall be set out as in the example and in addition will carry a front sheet showing the following information:

Name..... Call Sign.....
Address..... Section.....
..... Claimed Score.....

Declaration: I hereby certify that I have operated in accordance with the Rules and Spirit of the Contest.

Signed.....
Date.....

Note: Entries on the front sheet must be clearly shown in block letters.

12. The right is reserved to disqualify any entrant who, during the Contest, has not observed the regulations or who has consistently departed from the accepted code of operating ethics.

13. The ruling of the Federal Contest Committee of the W.I.A. will be final. No dispute will be entered into.

14. **Awards:** Certificates will be awarded to the winners of each section in each VK and Overseas Call Area. The VK contestant who returns the highest score in the transmitting sections and who is a financial member of the W.I.A. will hold the Trophy until the next Ross Hull Contest is decided, and in addition will receive an appropriately inscribed photograph of the Trophy.

GENERAL

A new method of scoring has been evolved from suggestions made by the majority of VK Divisions. Comments on the operation of this new method will be appreciated by the F.C.C. It is suggested that contestants obtain a large scale map of Australia and of their State and mark on these maps the radial distances from their location in accordance with the scoring table.

RECEIVING SECTION

1. Short Wave Listeners in Australia and Overseas may enter for the Contest, but no transmitting station may enter.

2. Contest times and logging of stations on each band are as for the transmitting sections.

3. To count for points, logs will take the same form as for transmitting sections but will omit the serial number received. Logs must show the call sign of the station heard (not the station worked), the serial number sent by it, and the call sign of the station being worked.

Scoring will be on the same basis as for transmitting stations. It is not sufficient to log a station calling CQ.

4. A station heard may be logged only once per calendar day on each band for scoring purposes, but additional reports will be of value to the F.C.C.

5. **Awards:** Certificates will be awarded to the highest scorer in each VK and Overseas Call Area.

SCORING TABLE

	50 Mc.	144 Mc.	228 Mc.	576 Mc.	Higher
Distances Between Stations					
Up to 10 miles	1	1	1	1	5
Over 10 and up to 25 miles	1	1	1	2	10
Over 25 and up to 50 miles	1	1	2	10	30
Over 50 and up to 100 miles	4	2	6	20	80
Over 100 and up to 200 miles	10	4	10	30	80
Over 200 and up to 300 miles	20	10	16	40	
Over 300 and up to 500 miles	10	16	30		
Over 500 and up to 1,000 miles	2	30	40		
Over 1,000 and up to 5,000 miles	10	40			
Greater than 5,000 miles	20	50			

EXAMPLE OF TRANSMITTING LOG

Date/Time	Band	Emission	Call Sign	RST/NR Sent	RST/NR Revd.	Distance	Points Claim.	Blank

NOTE—State whether Time is E.A.S.T. or G.M.T.

EXAMPLE OF RECEIVING LOG

Date/Time	Band	Station Heard	RST/NR Sent	Station Called	Points Claim.	Blank

NOTE—State whether Time is E.A.S.T. or G.M.T.

The present with a future . . .

Give
him
a



EASY TO
BUILD
KIT



Building a Heathkit is fun—and the fun lasts a lifetime because there is no finer quality electronic equipment in the world than Heathkit! No experience is needed to build Heathkit—assembly instructions are written in simple, non-technical language that even a child can follow.

The "ADD-ON" Purchase Plan brings you all the Heathkits you need without waiting! It works like this . . . Just ONE small down-payment is required for your first Heathkit and additional Heathkits are yours for NO FURTHER DOWN-PAYMENTS providing your total of monthly repayments is sufficient to cover the deposit required on your new purchases.

To become a satisfied Heathkit owner visit your nearest Warburton Franki Heathkit Centre or order by mail. Full details of Easy Purchase Plans will be sent to you on request.

HIGH PERFORMANCE 5" OSCILLOSCOPE KIT (O-12U). Gives laboratory performance at less than utility 'scope price. Vertical frequency response 3 c/s-5 Mc/s. Exceptional sweep circuit range of 10 c/s-500 kc/s. In five steps. £64/8/-.

GENERAL PURPOSE 5" OSCILLOSCOPE KIT (OM-3). Exceptional value for a 'scope at this price. Features wide vertical amplifier frequency response. Sweep generator multioctave 20 c/s. to over 150 kc/s. Vertical frequency response plus or minus 3 db. 4 c/s-1.5 Mc/s. Plus or minus 6 db. 5 c/s-2 Mc/s. £44/12/-.

RADIO DIRECTION FINDER KIT (DF-3). A de luxe 3-band navigation aid. Sense antenna eliminates 180° ambiguity in bearings. Uses 6 flashlight batteries. 200 Kc/s-3.4 Mc/s. coverage. Illuminated dial & tuning meter. £121/2/-.

GRID DIP METER KIT (GD-1B). Serves either as an oscillator or absorption wave meter. Align I.F. stages, adjust traps, filters and tuned circuits, and use this handy instrument for coil winding applications. £34/13/-.

HARMONIC DISTORTION METER KIT (HD-1). Checks audio distortion accurately. Used with audio generator, the HD-1 will measure harmonic distortion at any frequency between 20 and 20,000 c/s. £55/8/-.

ELECTRONIC IGNITION ANALYZER KIT (1A-1A). Checks all ignition parts while they are in action. Switch selection of primary or secondary circuit patterns. £72/10/-.

DEPTH SOUNDER KIT (M1-10). Shows depth, type of bottom, submerged objects. All transistor, flashlight cell. Dial calibrated 0-100, rotating neon indication. £68/10/-.

AUDIO GENERATOR (AG-9A). Produces near-perfect sine waves for audio testing. 10 c/s-100 Kc/s. Accuracy plus or minus 5%. Distortion less than 0.1 of 1%. £58/1/-.

SINE, SQUARE WAVE GENERATOR KIT (AG-10). Both Sine and Square Wave outputs may be used at the same time. Frequency 20 c.p.s.-1 Mc. Frequency response plus or minus 1.5 db. £56/17/-.

COMMUNICATIONS RECEIVER KIT (AR-3). Low cost Amateur and Short Wave Receiver. Modern superhet. circuit with high sensitivity. 550 Kc-30 Mc. £48/15/-.

AUDIO V.T.V.M. KIT (AV-3). Designed for accurate measurement of critical a.c. voltages. Frequency response plus or minus 1 db., 10 c.p.s.-600 Kc. Features large 4 1/2 inch meter. £90/12/-.

RESISTANCE-CAPACITANCE BRIDGE KIT (C3-U). Portable a.c. powered, measures a wide range of capacitance 0.00001-1,000 µF. Power factor and leakage. Resistance 100 ohms to 5 megohms. £23.

HI-FI STEREO AMPLIFIER KIT (S-88). 8 watts per channel -1% distortion at 8 watts per channel. u/L push-pull output, gauged controls, push-button selection. Inputs for Stereo, Mono, Gram and Tape Recorder. £72/2/-.

V.T.V.M. KIT (V-7A). The V-7A measures A.C. volts to 1,500 volts. R.M.S. 4,000 volts A.C. peak to peak. D.C. volts to 1,500 volts. Resistance 1 ohms to 1000 megohms. Input resistance 11 megohms. £55/8/-.

TUBE CHECKER KIT (TC-3). This Tube Checker will test all tube types encountered in everyday radio TV work. Features versatile element switching, 9-tube sockets, easy-roll chart, checks emission and leakage. £44/12/-.

VISUAL-AURAL SIGNAL TRACER KIT (T4). Pinpoints receiver faults quickly and economically by tracing signals audibly through its speaker or visually through its "eye" tube. Also locates "noise" and intermittent components. £32/6/-.

IMPEDANCE BRIDGE KIT (1B-2A). A Wheatstone Bridge, Capacity Comparison Bridge, Maxwell Bridge and Hay Bridge are combined for precision test facilities. Built in 1000 c/s. generator for A.C. tests. 1% decade resistors used. £58/12/6.

AUDIO ANALYZER KIT (AA-1) Here in one instrument is provided an A.C. V.T.V.M. audio wattmeter, and a complete intermodulation distortion analyzer. Measures noise, frequency response, output, gain and power supply ripple on V.T.V.M. Wattmeter allows measurement of power output with either internal or external loads. £58/17/-.



O-12



GD-1B



HD-1



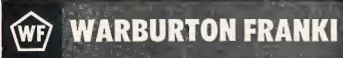
AG-9A



AR3



SSS



PERTH: Tough Instrument Service Co., 993 Hay St. WA 7813. (Prices slightly higher in W.A.)
SYDNEY: 307 Kent Street. 29-1111.

ADELAIDE: 304 Flinders St. W 1211.
BRISBANE: 28 Chester St. Fortitude Valley. 61-5211.
MELBOURNE: 339 Lonsdale St. 67-8351.

MAIL ORDERS are delivered FREE in the metropolitan areas of Adelaide, Brisbane, Melbourne, Sydney and Perth. Send your cheque or M.O. to your nearest W.F. office.

CATALOGUE describes the big range of Heathkits for testing, amateur radio, stereo, auto and marine available on request.

VK-ZL DX CONTEST, 1960, RESULTS

Many thanks for your support in the 1960 VK-ZL DX Contest. Conditions on all bands were bad, especially during the phone week-end with the result that activity was not as high as usual. Nevertheless, the keener DX operators persisted and produced some excellent scores—made possible only by your support. Happy operating, good DX and 73,

Jock White, ZL2GX,
Contest Manager, N.Z.A.R.T.

AUSTRALIA

C.W.—	Call	40	20	15	10	Total
VK1JE	55	2475	220	—	—	2750
VK2GW	1675	5745	2305	2770	12495	
2ADE	—	4215	3135	2140	9490	
2APK	—	2785	1095	655	4515	
2HV	—	460	—	—	460	
VK3DQ	1295	3410	2360	1350	8415	
3MR	—	5275	—	—	5275	
3YD	—	4170	—	—	4170	
3JF	—	3970	—	—	3970	
3ARK	—	3850	—	—	3850	
3XB	1300	—	—	—	1300	
3TL	—	155	—	—	155	
VK4SN	55	1615	1940	740	4350	
4XJ	—	2035	—	3045	3045	
4SS	—	2035	—	—	2035	
4SD	—	750	—	—	750	
VK5NO	1410	5935	4210	1490	14045	
5RX	—	3275	—	—	3275	
5JE	—	1705	—	—	1705	
5NQ	—	55	790	55	900	
6JT	—	340	55	430	825	
5LD	390	—	—	—	390	
5RK	—	380	—	—	380	
5LZ	—	165	110	275	550	
VK6WT	955	1995	—	—	2950	
VK7SM	265	3530	1110	1600	6505	
7KA	—	2740	1140	900	4780	
7RY	—	270	135	—	405	
VK9XX	950	3500	3835	1540	9815	

PHONE—

Call	40	20	15	10	Total
VK2AKF	—	1620	760	950	3330
2WC	—	2730	—	—	2730
2AKV	—	—	1000	490	1490
VK3JE	—	165	1155	—	1320
3ADN	—	110	—	—	110
VK5MS	—	8935	4480	2475	13790
5NQ	—	4375	1380	1715	7450
5LZ	—	275	55	—	330
VK7WA	—	1450	770	740	3345
VK9NT	—	3480	400	—	3880
8XK	—	—	1290	155	1445

Check Log: VK2ADE.

RECEIVING—

BERS-195—E. W. Trebilcock	Points
WIA-L2022—D. M. Grantley	5125
WIA-L5031—C. Hutchesson	4155
WIA-L3065—I. D. Thomas	3665
WIA-L6003—F. H. Price	2840
WIA-L6005—D. S. Pratt	2105
WIA-L2033—D. W. Shephard	1555
RA2945—M. Cadzon	985
—Miss O. J. Martin	575

NEW ZEALAND

C.W.—	Call	40	20	15	10	Total
ZLIAH	1550	5530	4155	2300	18555	
1AIX	—	5855	3335	2505	11705	
1AJU	380	3280	4750	2830	11240	
1APM	—	5410	3985	1565	10960	
1HS	—	5110	1305	3950	10365	
1NG	160	4195	400	1625	6380	
1AFW	—	3080	1140	1025	5245	
1HY	550	—	990	55	1595	
ZL2AWJ	*1445	5410	2060	1360	10275	
2GS	905	4880	1670	2230	9685	
2PM	670	3870	1020	—	5560	
2AYJ	—	5165	—	—	5165	
2GX	—	1295	2290	—	3585	
ZL3US	—	2830	2710	—	5540	
3OB	—	3465	600	1215	5440	
ZL4GA	*1170	4570	1260	680	7690	
4JF	—	450	—	—	450	

Check Logs: ZL3CK, ZL1AMM, ZL3IS.

* Includes 55 on 80 metres.

† Includes 150 on 80 metres.

PHONE—

Call	40	20	15	10	Total
ZLIAIX	490	5200	2945	3120	11755
1KG	155	4390	1725	2270	8540
1HA	—	2920	2275	1155	6350
1HY	—	220	55	—	275
ZL2GX	—	220	—	—	220
ZL3RT	—	210	495	—	705
ZL4JF	—	55	—	—	55

Check Log: ZL1AMM.

RECEIVING—

Points	Call
RA2834—W. L. B. Douglas	3430
ZL2-259—L. I. Davies	1110
ZL408—A. Petrie	Check

OVERSEAS

C.W.—

North America	Points
W1GYE	485 pts. KXGCM
W1WY	Check W6PFI
K1KPS	Check K8BOB
W1EQS	880 pts. W7JMA
KJUTC	1 " K7KGP
W1RNY	45 " W7BTH
W1APL	325 " K7BID
W1KVV	1295 " W7WIN
W1BJ	1079 " W9WNV
K4PVD	550 " K9WTS
K1JIS	290 " K2CXY
W1QVJ	43 " W0BMM
W5RC	4104 " W0MCK
K5KDI	395 " W0CTW
W5RUK	1102 " K1JALZ
K5UYF	1100 " V8SBWY
W5WJ	612 " K1MCC
J2AAT	518 " T2CPT
W6LDD	5130 " XE1PJ

South America

HKTZT	175 pts. CYBBD
HK1PT	Check YV3AS
CE1AG	—

Asia

J1AIV	4824 pts. JA1BKU
JA1WJ	943 " JA1BCP
JA1WV	783 " BV1US
JA1JCN	760 " MB6CKY
JA1AD	340 " YS1ADL
JA1BTH	168 " XZ1TZ
JA1EM	102 " UA1AG
JA1AA	68 " UA1GTA
JA1DUR	48 " —

Europe

DL1FF	2054 pts. OK3KGW
DL1EN	1150 " OK3KGZ
DL1DX	1350 " OK1KCT
DL1AA	1200 " PA0TAA
DL1BA	720 " PA0LOU
DL1YA	720 " PA0WAC
E1SCV	72 " OH1RU
221	OH1TN
88	OH1PS
PE7M	OH1YV
G4CP	OH2QO
G5RP	ON4LK
GI1PW	1902 " PA0FJ
H8WMO	8 " SP1PZ
H8WTT	276 " SP1KJ
H8SD	30 " SP1ZU
II1AGA	32 " SM1LL
OE1RE	788 " SM1CCE
OE1WB	136 " SM1ATK
OZ1OMR	48 " SV1WZ
OK1LM	634 " U8SKAB
OK1EI	119 " UR1BU
OK1MO	18 " UR1KA
OK1KJ	5 " —

Oceania

PK1AH	1675 pts. ZK1AR
W6W/KWS	987 " KH1DOW
VR1B	4294 " KH1DGL

Africa

FA1RJ	210 pts. —
-------	------------

PHONE—

North America	Points
W1WY	15 pts. W1JTN
KJUTC	1 " K8CFL
W4SIS	1 " W5BCC
W4EEO	15 " K1ECT
K5KBB	2176 " K1JEL
K1MDX	1735 " VE1DDI
K4GOW	54 " VE1PT
K5ZIT	238 " VE1IN
K5UYF	88 " TG1CP
K1RTI	50 " TG1CH
W1ZGZ	50 " TG1CMF

South America

YV1EE	185 pts. YV6AKU
YV5AKP	1 " —

Europe

DL1LL	611 pts. OH1SM
EA1NE	250 " PA1PJC
EA1CY	40 " SM1ACC
GE1Z	118 " UR1BU
CT1EY	218 " UR1ZAR
OE1RZ	58 " —

Oceania

KH1DGL	611 pts. ZK1AR
K6SLD/KWS	1200 " —

Africa

EL1A	1 pts. Z86NZ
------	--------------

Asia

JA1AA	72 pts. BV1US
JA1WJ	42 " OB1CT
JA1GS	30 " BM1DQ
JA1BK	1 " UA1GTA

RECEIVING—

M. Schoenher	704 pts.
DL1487—F. W. Kneppel	294
S. Pakko	55
DL1487—H. Sijpka	Check
BE1233	27 pts.
OE1-314—B. Christian	24
HE1E2Z—J. Kundig	31
SM1-375—K. Nyström	72
SM1-314—H. Hjeltnestrom	12
SM1-312—L. Svensson	45
SM1-225—R. Johansson	28
SM1-225—S. Nymann	28
SM1-371—B. Berling	Check
Y02-476—A. Clures	363 pts.
CR1-1207—K. Holm	270
R81-4904—E. H. Sherlock	270
K2-1079—B. Adams	4
J1-1578—K. Watanabe	165
JA1-1383—K. Tsukubara	969
JA1-1794—S. Okuno	323
JA1-1134—T. Ushijima	480
UA0-31213—Zaitkin	480

CHANGE OF ADDRESS!

WILLIAM WILLIS

& CO. PTY. LTD.

are now situated at

**428 ELIZABETH ST.,
MELBOURNE
PHONE 34-6539**

We would like to take this opportunity of thanking all our clients for their support during the years of our tenancy in Bourke Street and trust we can look forward to your continued patronage at our new address.

We Welcome You To Our New Premises!

BOOK REVIEW

"THE SURPLUS HANDBOOK"

A 94-page quarto size book dealing with various military surplus radio equipment, much of which is available on the Australian market. Each piece of gear is provided with an identifying photograph and the circuit.

It is a well-prepared book and contains much information of value to local Amateurs, for instance the R.A.X. receivers are featured, along with 46 other circuits. This book would repay its cost by providing details on much locally available gear, which to date has not had circuit details available. For any one owning BC312, BC348, Super Pro, MN26, T.C.S. gear, etc., this is an excellent book.

Local price 35/8; our copy from McGills Agency, Elizabeth St., Melbourne.

"VHF FOR THE RADIO AMATEUR"

This 208-page book comprises an excellent volume for anyone interested in v.h.f. Nine chapters cover the major aspects of v.h.f. gear and comprise: propagation, antennae, transmitters, modulation, power supplies, converters, i.f. systems, pre-amplifiers and test equipment.

The author of the book is recognised as one of the leading v.h.f. experimenters of today and in this book he has provided a comprehensive survey of modern practices including parametric amplifiers and gear for 1296 Mc. A book you will repeatedly refer to and learn from after many readings; a must for all serious v.h.f. men.

Local price 41/6; our copy from Technical Book Company, Swanston St., Melbourne.

IT'S NEW!

"VHF FOR THE RADIO AMATEUR"

by FRANK C. JONES

Price 42/- plus 1/6 postage

The latest and most complete material on VHF. Hundreds of diagrams illustrating Radio Propagation, Antennae, Transmitters, Modulation, Power Supplies, Converters, Receiver IF systems, Pre-amplifiers, Test Equipment, etc. Whatever your interest, you can be sure that it will be completely covered in "VHF FOR THE RADIO AMATEUR".

Every Amateur will want one for his shack!

We predict it will be a quick sell-out!

ORDER YOUR COPY NOW!

McGILL'S AUTHORISED NEWSAGENCY

"Established a Century"

183-185 ELIZABETH STREET, MELBOURNE, C.1, VIC.

"The Post Office is opposite"

Phones: MY 1475-6-7

SIXTH ELIZABETH BIRTHDAY CELEBRATIONS

In November 1955 the town of Elizabeth was officially begun. Named after Her Majesty Queen Elizabeth the 2nd, the town of Elizabeth has grown to become the largest town in South Australia, outside the metropolitan area, with a population of 25,000. Of this population at least one person in every 1,000 is a Licensed Amateur.

On the anniversary of the foundation of the town each year the Elizabeth Birthday Celebrations have been held and have become a week of festivities, attracting widespread local, State and even interstate interest. From the start individual Amateurs have co-operated in establishing a station at the Saturday Fair, however with the advent of the Elizabeth Amateur Radio Club this has now become a club event.

This year the Fair will be held on Saturday, 25th November, and it is anticipated that in the region of 30,000 people will attend. The E.A.R.C. station, VK5LZ, will operate from 10 a.m. until 10.30 p.m. from this location.

In an endeavour to provide good solid contacts for demonstration to the public, the club station will operate on the 80 and 40 metre bands only.

An appeal is hereby made to the other Amateurs of Australia to assist us in this effort.

An interesting feature of the club's activities is the Elizabethan Award issued for contacts with stations in the town. The rules of this award are appended herewith.

If you are interested in either assisting in displaying Amateur Radio to the public or the award, or both, here is your chance.

Procedure for contact with the club station on 25th November will be carried out as follows: Throughout the day other stations within Elizabeth will be required to act as control stations. Calls should be made to the control station who will direct any stations calling to transmit to the official club station on the club station frequency as required. By this method we hope to avoid stations causing QRM to each other and to contacts being held with VK5LZ and thus create a good impression for the public.

We request all Amateurs wherever possible to assist us by providing contacts, adhering

to the above simple rule and by keeping a watch out on the band before transmitting so as to avoid causing QRM.

In this way we feel that most benefit can be brought to all, particularly the aspect of public relations with those who may wonder at our hobby.

So keep a watch out for VK5LZ, Elizabeth on 40 and 80 metres on Saturday, 25th November. You can help us and also make contacts for our award.

Call signs of some of the Elizabeth stations are as follows: VK5 SLZ (club station), SDY, 5ZL, 5EU, 5FY, 5HA, 5HB, 5KD, 5NO, 5NQ, 5TB, 5QL and 5QL.

— Ian J. Hunt, VK5QX,
Communications Officer E.A.R.C.,
Birthday Celebrations Committee.

"SPEAKING OF THE PAST"

The Key Section of the Victorian Division, Wireless Institute of Australia, sent out the following circular to Amateurs, dated 3th January, 1954:

"It has been decided to hold a week-end camp at Mornington on A.M.A. week-end, 27th to 29th January, 1954. Several transmitters will be in operation in the camp and it is proposed to play inter-section cricket matches to enable a representative team to be picked for the annual match against the R.I.V.

"To discuss the arrangements to be made, a meeting of those who intend to be present, either for the duration of the camp or for one day only, will be held on Wednesday night next, 19th January, in the Institute rooms.

"Now here's a first class chance to have a really good week-end, with swimming, cricket, radio and any other hobby you care to name.

"The cost of the camp will be extremely cheap, so if you are interested please don't forget to come along on Wednesday night, 19th January, 1954, at 8 o'clock.—J. H. Winton, Hon. Secretary."

THE ELIZABETHAN AWARD

The Elizabeth Amateur Radio Club made the award available during 1960, and it has been fairly popular. Some 63 have been issued so far.

The award is approximately 10 x 7 1/2 inches in size and has black printing on a quality white card. In order to make the award something different, it is personally signed by the Amateurs who have been claimed by the applicant. It is also available to Short Wave listeners.

The awards are serially numbered, and the date of issue is that date on which the application was received.

Due to the award being signed personally, it takes a little while before it is ready for despatch, but it will arrive in due course!

Return postage or two International Reply Coupons are requested to save the club's resources.

If anyone is interested in the award, then remember the Elizabeth Amateur Club Station VK5LZ will be operating during the Elizabeth Sixth Birthday Celebrations on November 25. Many other Elizabeth Amateurs will be on also, so maybe that elusive "last one" will turn up for you!



The club station will be looking for good contacts and plenty of help with November in order to provide quality signals for the general public to hear at the shack.

The requirements for the award have been amended to include members of the Elizabeth Amateur Radio Club as well as those resident in Elizabeth and Salisbury districts.

To qualify for the award, the following conditions apply—

1. DX stations require six points (VK5 and VK5 included).
2. VK5 1 to 5 require eight points.
3. Contact with an Amateur resident in Elizabeth and Salisbury districts, OR a member of the Elizabeth Amateur Radio Club, count 1 point.
4. Contact with the official club station, VK5LZ, count two points.
5. Any contact on v.h.f. (50 Mc. and up) count two points.
6. S.W. Listeners must include call of station being worked by the Elizabeth Amateur.
7. All contacts after 1st January, 1960.
8. Enclose return postage or two I.R.C.

Send log details (call, date, time, band) to: The Award Manager, Elizabeth Amateur Radio Club, P.O. Box 8, Elizabeth, South Australia.

Calls of Amateurs resident in the district, or members of the club at present, are: VK5 SDY, 5ZL, 5EU, 5FY, 5HA, 5HB, 5KD, 5NO, 5NQ, 5TB, 5QL, 5QL, 5ZL, 5ZM, 5ZNA, 5ZNB, 5ZNC, 5ZDA, 5ZDV, 5ZEM, 5ZMA, 5ZMB.

50 Mc. W.A.S.

Call	Cor Add No. Cntr.	Call	Cor Add No. Cntr.
VK5WJ	12	4 VK5DW	2
VK5FM	22	4 VK5HR	5
VK5HR	4	3 VK5HT	7
VK5GP	2	2 VK5AZ	10
VK5LZ	2	2 VK5XA	11
VK5W	2	2 VK5NA	12
VK5GQ	10	2 VK5ACL	14
VK5ZAX	20	2 VK5ZD	18
VK5ZB	21	2 VK5ZC	19
VK5Y	2	2 VK5ZE	19
VK5LC	1	1 VK5ZE	19

BRIGHT STAR CRYSTALS

FOR ACCURACY, STABILITY, ACTIVITY AND OUTPUT

Our Crystals cover all types and frequencies in common use and include overtone, plated and vacuum mounted. Holders include the following: DC11, FT243, HC-8U, CRA, BTG, Octal, HC-18U.

THE FOLLOWING FISHING-BOAT FREQUENCIES ARE AVAILABLE IN FT243 HOLDERS:—

6280, 4095, 4535, 2760, 2524 Kc.

5500 Kc. T.V. Sweep Generator Crystals, £3/12/6.

100 Kc. and 1000 Kc. Frequency Standard, £3/10/6 plus 12 1/2% Sales Tax.

Immediate delivery on all above types.

AUDIO AND ULTRASONIC CRYSTALS—Prices on application.

455 Kc. Filter Crystals, vacuum mounted, £6/10/0 each plus 12 1/2% Sales Tax.

ALSO AMATEUR TYPE CRYSTALS—3.5 AND 7 Mc. BAND.

Commercial—0.02% £3/12/6, 0.01% £3/15/6, plus 12 1/2% Sales Tax.

Amateur—from £3 each, plus 12 1/2% Sales Tax.

Regrinds £1/10/-.

CRYSTALS FOR TAXI AND BUSH FIRE SETS ALSO AVAILABLE.

We would be happy to advise and quote you.

New Zealand Representatives: Messrs. Carrel & Carrel, Box 2102, Auckland.

Contractors to Federal and State Government Departments.

BRIGHT STAR RADIO

46 Eastgate Street, Oakleigh, S.E.12, Vic.

Phone: 57-6387

With the co-operation of our overseas associates our crystal manufacturing methods are the latest.

DURALUMIN, ALUMINIUM ALLOY TUBING

IDEAL FOR BEAM AERIALS AND T.V.

★ LIGHT ★ STRONG ★ NON-CORROSIVE

STOCKS NOW AVAILABLE FOR IMMEDIATE DELIVERY

ALL DIAMETERS— $\frac{1}{4}$ " TO 3"

Price List on Request

STOCKISTS OF SHEETS—ALL SIZES AND GAUGES

GUNNERSSEN ALLEN METALS PTY. LTD.

SALMON STREET,
PORT MELBOURNE, VIC.

Phone: 64-3351 (10 lines)

Telegrams: "Metals," Melb.



HANSON ROAD,
WINGFIELD, S.A.

Phone: 4-3362 (4 lines)

Telegrams: "Metals," Adel.

CHOOSE THE BEST—IT COSTS NO MORE



G. T. LEMPHREY & CO. LIMITED. Head Office: 27-41 Bowden Street, Alexandria, N.S.W.
and at Melbourne • Brisbane • Adelaide • Perth

AMATEURS

FOR THE BEST RESULTS

USE

IRONCORE

- ★ POWER TRANSFORMERS AND CHOKES
- ★ BATTERY CHARGERS.
- ★ SCOPE AND ORYX IRON TRANSFORMERS.
- ★ STEPDOWN TRANSFORMERS.

IRONCORE TRANSFORMERS PTY. LTD.

HIGSON LANE, MELBOURNE, C.1

Phone: 63-4771

PREDICTION CHART, NOV. '61

Mo.	E. AUSTRALIA—W. EUROPE S.R.	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24	GMT	45 20 21 14 7
<hr/>		
Mo.	E. AUSTRALIA—W. EUROPE L.R.	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	E. AUSTRALIA—MEDITERRANEAN	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	E. AUSTRALIA—N.W. U.S.A.	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	E. AUSTRALIA—N.E. U.S.A. S.R.	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	E. AUSTRALIA—N.E. U.S.A. L.R.	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	E. AUSTRALIA—CENTRAL AMERICA	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	E. AUSTRALIA—S. AFRICA	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	E. AUSTRALIA—FAR EAST	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	W. AUSTRALIA—W. EUROPE	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	W. AUSTRALIA—N.W. U.S.A.	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	W. AUSTRALIA—N.E. U.S.A.	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	W. AUSTRALIA—S. AFRICA	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7
<hr/>		
Mo.	W. AUSTRALIA—FAR EAST	Mo.
0 2 4 6 8 10 12 14 16 18 20 22 24		45 20 21 14 7

ELECTRONIC
A & R
EQUIPMENT

NEW RELEASE! NEW LOW PRICE!
LIGHTWEIGHT
EFFICIENT



TYPE P.S.25.

Input Voltage 2-14 volts d.c.
Output Power 45 watts maximum
Input Current 4.45 amp 13 volts in, 45 watts out
Output Voltage 13 volts or 200 and 350 volts simultaneous
Output Current 150 mA continuous 40 watts
150 mA peak intermittent (45 watts)
Efficiency at full output 78 per cent
Frequency of operation 400 c/s approx.

See your nearest A & R Distributor—

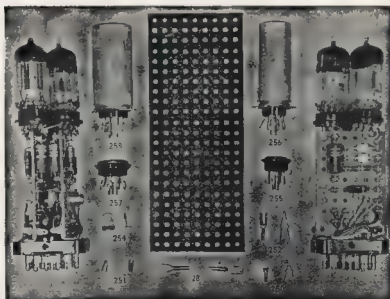
VIC J. H. Magraith, Radio Parts, Motor Spares Warburton Frankl, Howard Electrical & Radio Co., and Douglas Radio
N.S.W. W. Walker, Wayne Factory Reps and available at all leading Stockists
W. AUST. A. J. Wyle Factory Reps, Atkins Ltd, Carlyle & Co.
S. AUST. Gerard & Goodman, A. G. Healing, General Accessories
Q. LAND. A. E. Harold, Chandlers, Trackson Bros
TAS. Homecrafts Pty Ltd all Tasmanian branches

Maximum Operating Temperature 150°F approx 65°C
(ie ambient air temp at point of installation)
Filtering HT plus High 30 mV or 600 ripple
HT plus Low requires external filtering LT
and HT filtering includes suppression of harmonics
allowing use of converter on receiver receivers.
Dimensions 6 x 4 x 1 1/2 inches approx
Mounting 4-hole rear mounting. Complete unit easily removable from mounting base.

A. & R. ELECTRONIC EQUIPMENT CO. PTY. LTD. 378 St. Kilda Road, Melbourne, S.C.1. MX 1150, MX 1159

REDUCE THE SIZE AND COST OF YOUR NEW EQUIPMENT

**TYPICAL
UNITS
USING
ZEPHYR
MATRIX
SYSTEM**



Leaflets and
Price List available
from all
leading Wholesalers.



Enquiries invited
from
Manufacturers.

ZEPHYR PRODUCTS PTY. LTD.

58 HIGH STREET, GLEN IRIS, S.E.6, VIC.
Phones: BL 1300, BL 4556

H F

David Tanner, VK3AAU
17 Wolseley Street,
Mont Albert, Vic

17 Wolseley Street.

Mont Albert, Vic

Since last month I have made a tour of some of the v.h.f. installations in the VK3-VK5 area. I was quite impressed with some of the efforts of the country stations, especially in the way of antenna. The almost universal use of long yagis together with low-loss open-wire feedline in an endeavour to get the most effective power radiated was noticed particularly

Some of the boys are playing with 8CW4
nuvitors for their converters and I also ob-
served a few QB3/300's which were to be fired
up also. Two metres seems to be the premier
band at the moment, so we can start with
that for a chance.

Of interest to the chaps who are trying to work into VKS is the news that the beacon on 144.0 is now operating. Anyone in the west, interested in making skeds with the eastern States should contact Rod 4ZDS or Roy 8RY. The Channel 7 and 2 Adelaide t.v. has once again been received in Albany, on a Channel 2 yagi pointing to Perth, so it looks as though a 2 way contact is not far off again.

In Adelinde, SZFO is building a 2 mhz mobile, while Gilbert SGX occasionally works portable from ML Lefty, so keep an eye out for him. Now to add to the confusion, here are the notes on 6 mhz activity. The only real news of any note comes from Mix 4HD who worked JAI, 2 9 and on Sept. 30. The scatter stations were also coming through strongly at times. On the same day, Z2DQ was heard by VK7 at around 4135 hrs, but no contact was made. 72AV has been hearing an fm. station around 496 Mc peaking east, rather frequently but we don't know what it is.

I had rather a long contact with Bill ZL3QK on 20 mhz last week and he passed on some news about activity in ZL. Their t.v. is using Channel 1 which has fm sound on 50.75 Mc and this should be a good pointer to band openings. Programs run from 4 p.m. to 8 p.m. on Tuesdays and 4.30 p.m. to 8.30 p.m. on other days. Some of the boys over their have t.v., but BO reckons they should be able to fix it and get on the air when the band is open.

I also have some good news for those who still need a VK8 contact. There is a good chance

Editor "A.R." Dear Sir

—Jeff Vale, VK3NQ.

C.w. is a requirement of the A.O.C.P. The
Wa, with over 100 times the number of Hams,
manage to combine the three modes success-
fully. No other country as yet has abolished
c.w. To accuse F.E. of dictatorial attitudes is
ridiculous. C.w. may eventually be superseded,
but the time is not yet, and when it does
happen, it is to be hoped, for the sake of
the amateur Radio, it is relinquished by agreement,
and not taken by force, as Roth Jones
asserts.

—Al Shawsmith, VK4BB

The VKS gong held a fox hunt on 144 Mc. on Sept. 17 with Cedric 62BC the winner. The November fox hunt will be on 50 Mc so what about shaking up some gear and coming along. Don't bring your eight element yagi.

A fox hunt conducted both on 80 and 2 mcs on Sept. 23 was held with 7ZAK as the fox on 3 mcs. There was quite a good attendance of v.h.f. types but 7ZAK was the only bound to score. The fox must be getting too crafty.

The Group Inc. was very well attended and an interesting lecture on klystrons and magnetrons was given. This should fire up the embers of enthusiasm of a lot of chaps for u.h.f. work.

The Sept. meeting of the Hobart group travelled the airport at Llanerke, 18 members travelled to the drome and struggled back at 0630 the following morning. They had quite an interesting evening inspecting various aspects of the instrument landing system, the control tower and all that goes with—both h.f. and u.h.f.

News of 88 MCF activity is very short at the moment. SGP is one of the few stations active with xtal controlled gear in VK5 3AW and 3NN carry out cross band contacts as well as two-way on 1 mhz using xtal controlled gear. Kevin GZCB and Stan GZAS are going down to Cape Naturaliste just after Xmas in an effort to make the grade back into Perth on 288, 144 and 50 Mc. Keep them in mind so that you have some gear really working then.

For those who haven't a new Call Book, the following information will be of interest. All Australian V. channels have been allocated with the exception of Channel 8. 45 to 322 Mc and Channel 11 215 to 222 Mc. In addition, there is now a Channel 5A on 137 to 144 Mc, which is to be used in Illawarra in VECB. In view of these allocations, I feel confident that we will have our base and six more bands on a much surer footing than we did a year or so ago. —3AAU

Once upon a time we spoke of the "Spirit of Amateur Radio," but I am afraid that spirit is moribund and shortly we will be able to say "requiescat".

[Home](#)
[About Us](#)
[Contact Us](#)
[Privacy Policy](#)
[Terms of Service](#)
[FAQ](#)
[Sitemap](#)

Editor "A.B." Dear Sir:

People who, when Amateur Radio is struggling to justify its existence, openly advocate the use of lower power and omni-directional antennas should be excommunicated. I openly discriminate against low power stations.

The Institute would do Amateur Radio service if it were to ban the use of the BCR522.

Owing to the use of effective receiver bandwidths, we find it unwise to tune faster than 500 kc. per minute when looking for weak signals.

One well known South West Victorian station used to give me a 2 x 2 call on 144.7 and then wonder why I didn't come back.

-A. C. RECHNER, VKSZCR/T

Editor "A B" Dear Sir

Try listening on those frequencies, and not to the old armchair operators.

THE UNIVERSITY OF CHICAGO PRESS

GOSEFORD FIELD DAY

will be held on

of the

GOSFORD SAILING CLUB

★

40 AND 2 METRE HUNTS.

NYL BOAT TRIP, ETC.

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

Reg. Brook, VK2IAI, Secretary.

Maurlie Cox, W1A-13055
Flat 1, 37 Boyd Crescent,
Olympic Village, Heidelberg,
N.33, Victoria

Here is more from that man again, with news of the S.W.'s of VK land. Just to keep you up with the Awards and VK Contest news, I would suggest to far from the Federal Executive, so keep watching this page. Has anyone any queries? Just write and ask and we will do our best to help you.

Through this page I would like to thank Bill VKCAWS for passing on some not-so-old American Call Books for our use. These are as late as 1959, one of 1959 and three of 1960s. I think they will be used for prizes in forthcoming VKS Contests. Thank you very much Bill, it's a great time you was my help Bill, let the VK3 S.W.'s Group know.

VK NEWSPEREL

Thinking Australia.—The local S.W.'s Group are seeking of publishing a s.w.l. journal, which would include circuits, interesting topics, DX heard and in fact any item of interest to the S.W.'s. Trevor and Colin have joined the Federal Executive, so keep watching this page. Has anyone any queries? Just write and ask and we will do our best to help you.

The S.W.'s Group is growing in VKS and at the present time the numbers are up to 48, which was allocated to Len Cook in Darwin. He has the group up to 48, up to your neck of the woods? There are letters coming in all the time for issue of a s.w.l. journal. Well that's very good indeed, looks like my home State will soon catch up to my knowledge.

By the way, to all those concerned, the VK3 S.W.'s have not yet sought permission to use the VK prefix and no one to my knowledge is using it and must not. Permission must be sought first from the W.I.A.

Regarding the A.O.C.P. classes at the Mount, they will be able to get the services of Col. VK3CJ and will be resuming classes every Wednesday night. Col's rx L's, have been changed to a more standard box, to one out of a No. 10 set and is much satisfied. He says that when he's milking the cows 30 m. is only 10 m. Col., also, can get any of the cows earlier. By the time you read this, 300v. a.c. should be connected at his QTH. Col's 4-tube i.c.a. controlled converter is progressing very well.

Gary L3286 has his new rx going but still some minor troubles. Not long ago a few of the S.W.'s and Colin erected a 60 ft. mast for his w.h.l. beams and they will most probably be a 10 element on 8 m and a 4 element on 8 m. The mast has steps from about 8 ft. to the ground at 3.5 m. Altogether a line up of 12 ft. slides down the top section of piping to within about 4 ft. of the top.

Their converters for 1 and 8 m. will be 3-tube t.x. controlled jobs on each band, 6233 r.f. amp., 12A7T osc. and 6U8 mixer, feeding into the main converter at 7 Mc., then into the main converter at 3.5 m. Altogether a line up of 14 tubes and he says he may then get occasional signals. He's kidding of course.

Peter MacDougall, 6223 is building up a 6-tube rx and present uses a No. 19 set. Thank you, Colin, for all the news from the Mount.

Victoria.—Last meeting of the Group, 17 was present, and lots of plans were discussed, mainly about the construction nights coming up and the Christmas Break-up. It was decided that the New Year's Eve DX be obtained from W. land; this was most excellent.

Rob Young seems to be settling in as the new S.W. Secretary. We can get more out of him now. Noel Harrison has his new 50 ft. mast up the made it himself out of timber and cold water glue and now has a 20 m. doublet up. He uses an Eddystone 600 rx. Dave Fraser is having a spot of rx trouble (power supply but won't be long before he's at it again). Bob Young has a 20 m. doublet up. Command rx's to feed converters into. You should see his set up. Five of us worked up at the VKS Convention on Sunday. I climbed a tree, my legs are still stiff and we had a good day. Fred Mackiewicz was there also.

Ray there has been ill, sorry to hear it son, hope you soon recover 100 per cent. Len Poynter was at our last meeting and he tells me he heard a G3 on 160 m. calling CQ, so keep your ears open on the low band.

CORRESPONDENCE

Letters this last month are from Fred Mackiewicz, Peter Drew, Chas Abernathy, Peter Field, Eric Treblecock, Peter Vernon (a newcomer from VK1) and Harry Major. Thank you fellow S.W.'s.

Fred L3103 has been inactive lately due to school exams, also the transformer in his rx blew up, bad luck Fred. He still has a Phillips d.w. which is pretty good for 7 m.

Peter L5021, "The Ears of Nedlands," with all the DX he has heard and cards received, he's only got four Ws from the States, let's tech. Peter. He sent me a design of an antenna which he was told about by VK1G-G. It's a sort of vee, each leg is 86 ft. 6 in. and they are 80 degrees apart. The ends should be lower than the middle for best results. It is fed with open wire and the feeder may be any length. Now the two ends of the legs are joined so from the air it looks like the above. The ant. is multi-directional and works on 80, 40, 30 (far sure) and probably 15, 10, 6, 2 as well, so Peter says. I have one up and it works.) He received a QSL card from WVVH with a very interesting pamphlet with all the details of WVVH and WWV.

Not long ago Peter, Eric Hardwick L6001 and his XYL, Mrs. Hardwick L6002, visited Fremantle and went over the Japanese ship Ikushima Maru. Peter was shown from the stern down to the engine room and of course naturally the radio room. They drank Japanese munchies potato chips and talked to the r - radio ops. Peter twiddled the knobs of rx for half an hour and tried desperately not to let his pocket. (Of course he failed, he didn't have his chest bag with him.) This he had hears some DX.

Harry Major has been conspicuous by his absence and he seems to be doing odd jobs to do and regrets not keeping up with the latest doings. He hasn't heard much lately. SWI is poor at his QTH but SWI, SWI and TWI can all be heard very well. That is caused through long skip on 40. Harry, He's scrapped his t-valve super and is looking for a better rx. Hope you are successful.

Peter Field received a s.w.l. card from UGA-22317 and is mystified why it was sent to him. You've got me, Pete, I wouldn't have a clue, but that sort of thing sends me the S.W.'s sending their card to S.W.'s all over the world. Peter's teacher at school is interested in Amateur Radio too, get to him, Pete, and teach him all. Thanks for the letter.

Eric Treblecock—I am amazed at his statistics. It's really something to be proud of and he's setting a pretty fine example to those who are entirely interested in s.w.l. only, surprisingly enough there are only one or two in VK3 that are interested in the side of the Amateur Radio that I know of. It's nice to read of Eric's achievements. QSLs received 7200 (I think this is post-war, I'll confirm this next month), has heard 239 countries, 232 confirmed in 40 zones, log entries 246,723. QSL cards received in 1961 to end of Aug. 405 from 111 countries and 35 zones. Reports sent in 1961, 743 to end of Aug. Rarest 15 cards received in August in rarely order: ACSPN, ZLVBV/Chatham Is., EGZAT, KM88T, W8OLY/708, LASAG, YP8, 239 countries, OAFYN, LK1SFN, HKIQQ, KZ2MQ, ZCZPB, 45L1B and QSLs so far in Sept. HK7ZT, JA3AV, JZ0PY, QZ4UR, UA4IE, UA4RD, 35AV (letter direct in sealed envelope from the Ukraine), UC2KAG, UI8KRA, VK1ACA, W83MW (South Dakota), ZD88R, W8KAC (mobile marine).

Most amazing don't you think lads, and it is a real pleasure to put them down in this page. In my opinion he's the greatest S.W. in the S.W.'s, and in the bargain a mighty fine guy. He tells me he's done little listening in Sept. so far, only 50 log entries were made. Thanks for your statistics and letters.

Another newcomer is Peter Vernon of VK1. He says "I am an S.W. in Sydney and an attending Amateur, but I am still for the leaving certificate this year, I have not the time to join the W.I.A." Tech, tech, Peter, that's no good; but he subscribes to "A.R." and after receiving his first certificate, it's interesting. Glad you like it Peter. Peter's rx is only a dual wave with no r.f. stage and the antenna is 90 ft. long, 15 ft. off the ground.

Peter's rather unusual method of receiving s.b. may be of some interest to S.W.'s. In fact, a communications rx. He uses two rx. the local oscillator of one acting as a b.f.o. for the other on which it is intended to receive the signal. The extra rx. need only be on the rx. for example, if one desires to hear a sideband station on 7000 Kc. and the b.c. rx. has an i.f. at 455 Kc., simply tune it to 1390 Kc. with the volume down and the rx. will pick it up if it operates on the high side of the received signal will be tuned to 1775 Kc., now the 4th harmonic of this is 7100 Kc.—the frequency of a.s.b. station. Careful

manipulation of the b.c. rx's tuning knob will then produce results. Thank you, Peter. He also entered in the R.D. and likes it quite well. The World Radio Handbook he likes too. Here are some interesting frequencies to note that Peter has supplied. The Flying Doctor Service School of the Air around 0.8 Mc. On 6280 Mc. Melbourne Radio calling Small Ships. Thanks for your letter Peter, most interesting.

Well, fellow S.W.'s, that's my issue for this month, so 73 and best of DX, Maurlie L3055.

DX LADDER

	Countries	Zns	S.b.	S.b. No.
	Conf.	Hrd	Conf.	Hrd
E. Treblecock	272	279	40	1120
D. Grantley	80	229	30	64
A. Westcott	76	157	30	31
H. Hillard	62	201	30	3
M. Cox	32	203	19	3
C. Abernathy	27	58	21	79
P. Drew	18	108	15	89
T. Thomas	16	30	13	90
P. Field	13	118	6	
N. Harrison	10	20	13	180
J. Jenkin	10	137		
N. Fisher	9	30	3	3

SECRET CRYSTALS FOR AMATEUR BANDS

ACCURACY 0.02% OF
STATED FREQUENCY

3.5 and 7 Mc.
Unmounted, £2/10/0
Mounted, £3/0/0

12.5 and 14 Mc.
Fundamental Crystals,
"Low Drift,"
Mounted only, £5.

THESE PRICES DO NOT
INCLUDE SALES TAX.
Spot Frequency Crystals
Prices on Application.

Regrinds £1/10/0

MAXWELL HOWDEN
15 CLAREMONT CRES.,
CANTERBURY, E.7,
VICTORIA

seems they did for the terrible trio remained unfound, except by Harold, for the hour. While all this was going on, a 65-passenger launch was cruising on the lake with XYLs, YLs, OMs and junior ops on board. And to make matters even more hectic, a fiendish quiz, dreamed up by an old character, was circulating among all who had nothing else to do.

As well, as the mobile competitions, a display of home-built gear was arranged with a handsome prize for the winner. Each participant in each competition was given a ticket to be drawn at the end of the day. The prize for this was the Astor car radio. It was won by Bert ZYF who also won the prize for the best home-built gear. Ernie, XYL of Ivan ZATM, scooped the ladies' quiz again for the third year in succession. Next year, we're having a special elimination contest! OMA's quiz was won by Stuart ZAYF and the prize for the best field day programme submitted went to Dave ZAWZ.

And to ended another Blockbats Field Day. Many stories were told and many old acquaintances were renewed and many vows to return against next year were taken. It was pleasing to see such a good roll up and also to see some faces which had been missing from meetings for some time. Among these was Harry ZYL from the coal city. Hope to see you at the meetings too Harry. One of the regulars who could not be there was Harry ZAFS as he was in the hospital with his feet up. We're back on deck again now though and we wish you a speedy convalescence Harry. The committee is most grateful to the Boornigul ham-burgers for their assistance with the erection of signs and other "behind the scenes" jobs.

P.S.—If you want to know more about 2 mx and the mysteries associated therewith, his yourself along to the University College, Tughe's Hill, on Friday week, that's the 10th, and there you will find a man who knows much about this subject. Yes, I mean Harry ZKUX. So roll up and let's awaken 14 in Newcastle. As Bill is doing a Columbus act just now, I doubt that there'll be any social meeting during November. Never mind, see you the month after. TS, ZAXX.

SOUTH-WESTERN ZONE

The Ninth Annual Convention of the South-Western Zone of the W.I.A. was held over the holiday week-end, 30th Sept-1st Oct. at Tumburumba. President of the W.I.A. N.S.W. Division, Bill ZYB accompanied by his XYL and son, and Councillor Tim ZETM, represented the Divisional Council. The Convention opened on the Saturday morning at the Tumburumba Show Ground with registration and rag chews. During the afternoon the beauty spots of the surrounding district were viewed, when a tour was conducted by John ZEZ. The evening activities commenced in the C.W.A. Hall, with the Convention Dinner, which was chaired by Bill ZAYV. Sixty-six persons attended the dinner during which the Shire President, C. O'Keefe, officially opened the Convention. The toast of the W.I.A. was acknowledged by Tim

OBITUARY

FRANK GOYEN, VKUX

The death occurred, in Concord Repatriation Hospital on 20th August last, of Frank Goyen, VKUX, after four months' serious illness. Though Frank may not have been known to many members today, it was under his leadership that the N.S.W. Division began its new lease of life as the A.R.A. of N.S.W. was wound up and put into liquidation in the early thirties. Frank had held most offices in the Division over a number of years and rose to the rank of Squadron-Leader in the R.A.A.F. Amateur Radio was well represented at his funeral, by his brothers-in-law, VKs ZEK and ex-ZLS, and the Institute was represented by a life-long friend, Jim ZYC. The sympathy of members is extended to his family.

H. M. (MERRY) BROWN, EX-VKMB

Late N.A.A.F. and F.M.G., aged 55 years. Radio Amateurs in VKS heard this month, with regret and sadness, of the untimely passing of "Merry" as he was affectionately known to all and sundry. Although not active on the air for the past few years, he was in close contact with the Amateurs through his official capacity as a Radio Inspector, but is most remembered for ready assistance toward the budding Amateur, especially during the early 1930's when he established his school for training in Morse and theory, most of the early "2M" call signs in VKS being a lasting tribute to his painstaking attention for his students.

Respected by all for his fairness and high principles, it often being said of him that he would fight as hard for you as against you, if he felt it necessary. His passing is a severe blow to the VKS Radio fraternity.

To his sorrowing wife, Ivy, we extend our deepest and sincere sympathy, and can only hope that time will assist to ease the sense of loss and sorrow through which she is passing.

ZETM and at the conclusion of the dinner, an interesting address on Wireless Institute matters was presented by the President, Bill ZYB. Films were then enjoyed until supper time.

Activity commenced on Sunday morning at 10 o'clock, with a 3 mx fox hunt. This was given by Eddie IYF, second place went to Tim ZETM. The fox was Keith ZEAA. Back to the grounds by 11 a.m., all gathered around to listen to the Divisional broadcast. Due to poor conditions, contact was impossible on the call-back. Next came the Disposal Sale, which was well attended, after which lunch was taken. The early afternoon from 1.30 to 1.45 found members busy with the all-band scramble, but once again due to poor conditions, most of the contacts were of a local nature. How-

ever, Bill ZYB turned in a log of 1-4 contacts to take first place, the minor placings being filled by Frank ZACQ, with 13 contacts, and Ross ZFN with 18 contacts.

At 3 p.m. the hidden is hunt got under way, to be won by Tim ZETM with Keith ZEAA filling second place. Back again at the Showgrounds, the final event of the Convention was the blindfold test. The individual was a tie between Beverly Hilton and Freda ZSU. First in the girls' went to Dave ZSE, second place was held by Tim ZETM. Graeme Flynn took away the first prize in the harmonic section, with Fiona Cutts coming second. After afternoon tea, prizes were presented to the winners of the various events and the zone officer thanked all for attending and the Tumburumba boys for a job well done. A film evening was held by the 22nd, over night and a very enjoyable tour of the area was conducted on the Monday.

YOUTH RADIO CLUBS

There are gratifying signs of increased interest (official and otherwise) in Youth Radio Clubs. The VKS Council have approved in principle the granting of the various event lines formulated by Rex ZYA and a Youth Radio Club Committee is being born with members. Rex ZYA, Bro. Lee ZAXX, Keith ZAXX and Ken IKM.

Canberra is on its way to being a busy centre, as far as spare time permits. Youth groups are meeting at ILS Lonsdale High School, IBC (projected at Police Boys' Club), and IACA (Canberra Radio Society). The total of active members is about 60. Old sets are collected and scrapped for parts. A series of 22 stencilled sheets is available, ranging from "Information Sheet and Membership Form," "Crystal Set," "Colour Code and Valve Sockets," to circuits for 1 transistor, 1 valve and upwards. (Copies available if anyone writes to IKM). The VKS Correspondence is in steady demand (but not allowed to interfere with high school home-work). The results in a few years should be interesting.

THE BLUE MOUNTAINS SECTION

The monthly meeting for October was held at Lawson Council Chambers, as usual, and 14 members attended. There being no lecture the night was devoted to business, the section field day programme was finalised and it looks like a good day should be had by those who join us on 5th November.

The lecture Dave ZNK delivered to C.D. at Lawson was well received. A typical evocation film was shown and proved very enlightening. Eight club members ventured to assist us to support Dave and by the many questions asked all round, the night was voted a complete success.

The on-the-air get-together is proving quite successful, even though the October night was a bit confused. Some of us remained on till almost midnight. Don't forget second Fryday at 2000 hours, 80 and 2 mx.

Sid ZAYK is selling up all his gear in preparation for going on six weeks' holiday and

★

Hunter Branch of N.S.W. Division, W.I.A., held its Annual Dinner on 29/9/61. Among the 70 who attended were (standing, from left) Gordon ZGSS, Branch Secretary; Percy ZAPQ, Federal Councillor; Allen Fairbairn, M.H.R.; ZKB, Stuart ZAYF, Branch President; Lione ZCS, Branch Vice-President and seated Professor J. S. Ratcliffe, M.L.R.E.; Ray ZEC; H. S. Young, RAME, P.M.G's. Dept., W. N. Williams, ZKV, Editor "RT & H."

Block by courtesy of the "Newcastle Chronicle Herald and Miners' Advocate"

★



MR. T.V. SERVICEMAN!

PROTECT YOURSELF

WITH

TELECOMPONENTS PARTS

- ★ **PROTECT YOUR MARGIN.**—Telecomponents' products are more keenly priced to the Trade.
- ★ **PROTECT YOUR GOOD NAME.**—Telecomponents' coils and transformers are impregnated under vacuum with specially compounded tropic proofing varnish.
- ★ **PROTECT YOUR CUSTOMER.**—Telecomponents' parts are fully guaranteed.
- ★ **PROTECT YOUR SERVICE CONTRACT RETURN RATIO.**—Only Telecomponents offer replacement windings for E.H.T's. and Frame Output Transformers. Why replace the whole unit?
- ★ **PROTECT YOUR INVENTORY**—Why carry stocks of components for all makes and models? Telecomponents' universal types have been developed to suit a variety of receivers without loss of performance.

AVAILABLE FROM THESE WHOLESALERS:

FERRIS BROS. PTY. LTD.: SYDNEY XF 0221, MELBOURNE 42-3141, BRISBANE 56-0102, NEWCASTLE 61-5071, WOLLONGONG B 1922, **Edmunds Bros. Pty. Ltd.,** Melbourne 32-3971. **PERTH: Tedco Pty. Limited,** 26-3225. **TASMANIA: W. & G Genders Pty. Ltd.:** Launceston 2-2231, Hobart 2-7201, Devonport 2-1921, Burnie 830. **SOUTH AUSTRALIA: Radio Electrical Wholesalers Ltd.** 46-4041

TELECOMPONENTS

752 PITTWATER ROAD, BROOKVALE, N.S.W.

Tel. 93-0221

A UNIT OF THE FERRIS GROUP OF COMPANIES

then perhaps for an extended working tour. Sid will have portable equipment, about 25w. on all bands, so keep a listen out for him. Alec ZEX has obtained a 2 mx 100w. rig—yet another to the clan. Hope to hear a lot of you on 2 Aec. Don ZAKK will have station modulation very soon and is going to throw the key away. Looks like I will have to hot things up here to keep up with the Jones' Dick RHM must be a quiet worker, my spies haven't come up with anything yet, maybe next month.

No excuse for Noel Walker now, he has all the his and pieces he has and is listening on 2 mx and has more than half a tx for that band. January exam, Noel! Jack ZADP will be on holidays in a week or so, half your luck and have a good time. Col ZAGU was on 2 mx the other night with Bob ZASZ, and according to my spies Bob is going to have a go at sideband 73, ZADA.

BOORAGUL HIGH SCHOOL RADIO CLUB

Although there has not been a great deal of transmitting activity this month, things are still moving behind the scenes and it is hoped that regular transmissions can now be maintained. The club has just completed the recruiting drive from second-year classes and our numbers have almost doubled. Most of the senior boys are getting ready for examinations towards the club attainment certificates and it is hoped that some of the new members may also try for the Elementary in December.

Now that Ian has his call, ZATF, he has taken to hiding 'tx's. At least he very effectively hid the 40 mx one for the recent Blackalls Field Day so that only one contestant found it. Tony helped him there. Bruce and Allen acted as pathfinders, not for the hidden tx, and put up the signs directing strangers to Blackalls.

Rex ZYA has presented the club with quite a quantity of gear including among other things, an AT5 on loan from the Institute. We may have a big signal soon!—73, ZATZ.

NON-DELIVERY OF "A.R."

If you are not receiving your copy of "A.R." please follow these steps which will ensure the correct procedure is followed; any attempt to short circuit the system will only further delay matters.

Write to your Divisional Secretary advising non receipt of "A.R." do not write to "A.R." The Divisional Secretary should write to the Circulation Manager "A.R." P.O. Box 36, East Melbourne, C2, Vic., advising him of the problem. Unless this advice is received before the 8th of the month, a further month must elapse before the member can be re-instated upon the circulation list.

Please ensure that you always advise your Divisional Secretary in writing, verbal advice will not do.

HIGH SCHOOL RADIO CLUB MEMBER GETS FULL LICENSE

One of the members of the Booragul High School Radio Club (H.S.R.C.) has recently been allocated his full call. He is Ian Forrest, VKZAJF, a seventeen-year-old fifth year pupil. Although he has been interested in radio since he was 15, Ian began serious study only last December. Ian is the first member of the recently formed school radio clubs to gain his ticket. Because of school work, he finds it difficult to work the hands as much as he would like, but he intends to make up for this when the Leaving Certificate is over. A keen c.w. man, Ian found little difficulty in reaching the required speed for the A.O.C.P. The theory, he says, was a different matter.



The photograph shows Ian at the school station, VKZATZ. He designed and constructed the tx which runs about 16 watts, crystal controlled.

VICTORIA

STATE CONVENTION

On Saturday, 26th Sept., the Twelfth Annual State Convention commenced at 2.15 p.m. at Scotts Hotel when Senator Hannan opened the meeting. The Senator gave a short speech outlining certain facets of the Ad Hoc Frequency Committee and stated that regrettably he could not give any advance information. He continued with an outline of the regard in which he held the W.I.A. and wished all a successful and pleasant Convention, which it truly was. All present then visited the equipment display put on by various companies and which gave all there an opportunity to obtain first hand information on various items ranging from a xial microphone to a full size communications transceiver. In addition, leaflets on various items were available and these were rapidly put into people's pockets.

Excellent displays were featured by Messrs. Mullard, Cunningham, Zephyr Phillips, A. & R. E. A. Monk, Warburton Franki, Collins and Eric, who generously donated various trophies for the Convention prizes.

After afternoon tea the Convention business started. David Wray was in the chair with Michael Owen Secretary Business commenced by reading the past minutes which, after hav-

ing been accepted and discussed, left the way clear for new business. The Secretary gave a detailed account of the Dinner meeting, and culminating in the temporary loss of the Victoria Parade rooms and then outlined the steps to be taken to attempt to have permission granted for our future occupancy. It is present were surprised at the detail involved in these proceedings and approved of Council's action in the matter. The meeting continued by discussing various other matters which led to hilarity or fire, depending upon whether the motion was agreed or disagreed to. However, the motion being submitted, however, whilst it may have seemed dull, this important part of the Convention was actually very interesting. It was gratifying to note that so many attended.

At the conclusion of the Convention business the meeting retired and the Dinner meeting commenced. This was a most successful event and the laughter and talking during the entire evening reflected everyone's enjoyment of an outstanding time; and every credit must be given to Doug Bowie for his masterful effort in organising the feature of the day. If you could not be present make up your mind now to come along next year as it is an event you will wish to take part in again or participate for the first time. Put aside two shillings a week for the next year, so you can afford to take your wife or YL and have an evening out; it is well worth it.

On the Sunday a large gathering took place at Ferny Creek picnic grounds where the day commenced at 10 a.m., but many were there far earlier. The first event was the tx hunt and at 10.30 a.m. the VKCJY broadcast took place from the grounds and was re-broadcast over the p.s. system, then at 11 a.m. the first special auction began. Some of the items on sale were filled with eager bargain hunters, all of whom obtained something for the junk box. By now the grounds were beginning to fill with people, cars, children, and the smell of a barbecue lunch being cooked, so only a few were prepared to leave and inspect the tx. tx at Mt. Dandenong. Some of the items for sale were on 80 and 2 mx, whilst others just enjoyed a QSO with their friends.

After lunch a mystery taped voice contest was held and the winner was the prize of the year: Duck Talk Demons v. Ancient Modulation Maulers. This would have gladdened the heart of any amateur. Anything, but anything went, including the ban on all swears the pitch was at least four hundred yards long. No cricket was played in spite of the official designation, who had a good laugh. (Oh well, it only proves the superiority of A.M. on all occasions.)

After the lunch the children were enjoying themselves and being rewarded for winning races and the other events which had been arranged for them.

This two-day Convention was an event which reflects credit on all concerned and proves that every family can really enjoy themselves if they participate. One family, a group of VKO, were so out of it that they phoned their good wishes from Wilkes, and this was only on highlight of an outstanding two days.

And to conclude the description of the most successful Convention for which all credit must be given to the most important people—all those who enjoyed the Convention and who arranged by a very large team of organisers, to whom our thanks are due.

MONTHLY MEETING

The monthly meeting on October 4 was addressed by George Bills-Thompson, 3AHN, "The Subject, 'The Other Side of Photography'." George presented a paper with observation that many Amateurs work at interesting jobs not necessarily connected with radio, and the other Amateurs were all much from hearing about them. George, who works with Kodak, the name that is synonymous with photography, described the operation of the machine which applies the sensitive coating to film and paper. This machine, 400 feet long, worth a fortune, and the one in the southern hemisphere is equipped with elaborate instrumentation, any instrument of which may be replaced at a moment's notice with a sub-standard. George outlined the steps in making the emulsion coating the stock and checking the sensitive materials, and described some of the elaborate procedures which must be taken to avoid contamination.

It was interesting to note that every sheet of cut film, even the most sensitive automatic types, is examined visually by scientist for flaws before packing. Needless to say the colour slides which illustrated the talk were of excellent quality. A film showing the use of the high speed movie camera (over 2,200 frames per second) in the examination of rapidly moving objects, as revolving camera shutter mechanisms, and cathode ray tube

CHOOSE THE BEST—IT COSTS NO MORE

RESIN CORE SOLDER

for reliable connections

G. T. LEMPIERRE & CO. LIMITED. Head Office: 27-41 Bourdon Street, Alexandria, N.S.W., and at Melbourne • Brisbane • Adelaide • Perth



WARBURTON FRANKI

BIGGEST RANGE, BEST VALUES
in RADIO & TV PARTS

Q+ BOOSTER IMPROVES T.V. RECEPTION IN FRINGE AREAS

Guaranteed results Easy to fit at rear of set. Leaflets available

£9/15/- + 25% tax Please add postage.
Weight 5 lbs.

SPEAKERS 12 inch. 15 ohm Voice Coil.

15 watts input. Frequency range, 50 to 8,500 c.p.s.
Package weight—7 lbs.

£3/3/10 + 25% tax

BARGAIN IMPORTED RECORD PLAYERS

Famous DUAL-automatic type, superseded model 1004/T12. Brand new in sealed cartons

MUST CLEAR

£15-15-0 + tax

Packaged weight—11 lbs

POWER TRANSFORMERS

A & R SUPERSEDED NUMBERS

No.	mA.	Voltage	Filaments	
PT1768	125	325	5v. 2a., 6.3v. 2a., 6.3v. 2a.	55/- + tax
PT1769	125	350	5v. 2a., 6.3v. 2a., 6.3v. 2a.	57/6 + tax
PT1778	175	350	5v. 3a., 6.3v. 3a., 6.3v. 3a. c.t.	78/6 + tax
PT1783	180	410	5v. 3a., 6.3v. 4a. c.t., 6.3v. 5a. c.t.	100/- + tax
PT1782	200	450	5v. 3a., 6.3v. 3a., 6.3v. 3a. c.t.	106/- + tax
PT1781	200	400	5v. 3a., 6.3v. 3a., 6.3v. 3a. c.t.	95/- + tax

Any of above Transformers, 5/6 Pack and Post.

10 WATT W.W. RESISTORS

1 to 10 ohms	2/8 each	
11 to 5K	2/3	"
5001 to 7500 ohms	2/8	"
7501 to 10K	3/4	"
10001 to 12K	4/8	"
12001 to 15K	5/8	"
15001 to 20K	6/8	"
20001 to 30K	10/-	"

ALL VALUES AVAILABLE

Plus tax 25%

Plus Pack and Post, 1/- doz.

OUTPUT TRANSFORMERS

A & R SUPERSEDED NUMBERS

OT921/8—20 watt rating.	OT931/8—20 watt rating.
Primary, 6,600 ohm P.P.	Primary, 4,500 ohm P.P.
Secondary, 2 or 8 ohms	Secondary, 2 or 8 ohms.
£25/15/6 plus tax.	£25/15/0 plus tax.

Any of the above Transformers, Pack and Post 5/6.

RESISTORS—CARBON

IN LOTS OF 100 MIXED VALUES

1w. $\pm 10\%$ 60/- + 25% tax. $\frac{1}{2}$ w. $\pm 10\%$ 50/- + 25% tax.

Also available . . .

IMPORTED CRACKED CARBON RESISTORS

$\frac{1}{2}$ w. 13/- doz. + 25% tax. 1w. 10/- doz. + 25% tax.
 $\frac{1}{2}$ w. 8/- doz. + 25% tax. $\frac{1}{4}$ w. 13/- doz. + 25% tax.

IMPORTED REACTION CONDENSERS

Imported Moulded Alligator Clips, red and black	100 pF. 6/- + 25% tax.
Imported Crystal Earpieces	2/4 pair + 12 1/2 tax
Imported Front Loading Bezels—red only	5/8 each + 25% tax
Imported Miniature Phone Plugs and Jacks	2/3 each S.T. exempt
Imported Power Diodes HR25, 500 mA at 500 p.i.v.	2/3 pair + 12 1/2 tax
	16/- pair + 25% tax

Locally made CRYSTAL TURN-OVER PICK-UP CARTRIDGES

complete with 2 Sapphire Stylis. £12/6 plus 25% sales tax.

Plus Pack and Post 1/- any of the above.

METERS

Imported Meter Movements.

4" Square Black Case.

First Class Instruments.

F.S.D. 50 microamps. 87/6

F.S.D. 500 microamps. 79/6

CHASSIS PUNCHES

Hammer Type

Set of three 5/8", 3/4", 1-3/16".

£2/19/6

Plus Pack and Post 2/6.

WIRE P.V.C. HOOK-UP, 7/010.

Red — Green — Slate — Yellow.

15/- 100 yd. reel plus 25% tax.

Pack and Post 2/-.

6-CORE CABLE

Each core 7/010 P.V.C. (Shielded and P.V.C. covered overall.)

2/6 yd. plus 25% tax.

Pack and Post 9d. yd. or 4/6 doz.

OPEN SAT.
MORNINGS



WARBURTON FRANKI

359 LONSDALE ST., MELBOURNE — MU 8351



TRADE ALSO
SUPPLIED

Please include Postage or Freight with all Orders

The lecture at the November meeting will be on the subject, "Marine Electronic Equipment."—SAIL.

Page 21

TYPE 65

General purpose with low frequency response suitable for lively halls.

TYPE 66

P.A. use where less low frequencies are required than the 65 with a lift in the middle frequency to ensure high output without feedback.

TYPE 67

Communication use, has a further reduction in low frequencies than the 66 and increase in high frequencies for intelligibility through noise.

THREE INDIVIDUAL TYPES IN THE FAMILIAR "65" CASE

★

Available in Low (M.D.)
50 ohms, and High
(M.A.) Grid Impedance.

★



Retail Price including Sales Tax

Type 65 MA	...	£11/0/7
" 65 MD	...	£8/19/0
" 66 MA	...	£11/3/6
" 66 MD	...	£9/3/0
" 67 MA	...	£11/3/6
" 67 MD	...	£9/3/0

ZEPHYR PRODUCTS PTY. LTD.

58 HIGH STREET, GLEN IRIS, S.E.6, VICTORIA

PHONES: BL 1300, BL 4556

*AEGIS

* Australia's Own Brand

TESTED RADIO, T.V. and HIGH FIDELITY PARTS

- ★ FILTERS
- ★ COILS and I.F.s.
- ★ SPEAKERS
- ★ KNOBS, DIALS, POINTERS
- ★ AMPLIFIERS
- ★ CONTROL UNITS
- ★ TUNERS, KITS

AEGIS MANUFACTURING CO., 347 DAREBIN RD., THORNBURY, VIC

Phone 49-1017

Well, whatever I do, I must not end these notes for this month on such a note of gloom, and in looking around for some relief I have just remembered that at the end of the week there will be a wedding at Joe's. Well, I will be tripping, anyway. I have tried on my new striped hessian suit and although the trousers seem a little tight under the arms, I feel they will stand up to the strain. Everybody is asking Joe to have the floor strengthened for my rock-and-roll efforts, and rumour has it that I am to be approached to give a demonstration of the Charleston. Oh, and by the way, there will be some goodies and a display of the new variety of Pansy to have to watch my eye. 73, dPS (Pansy to you).

WESTERN AUSTRALIA

Since the visit of the VK3 bushfire party contacts with E.B. Hams have increased. It makes a contact more personal when an Amateur has visited your shack. Incidentally, we have a VK5 spy roaming around the State. One AXB, and we are wondering if he will ever get back to VK5 after sampling districts like Albany and Esperance. Better stay around Hill.

One of the highlights of the month was a hamfest at Moorra. This was controlled by GCL with his 150w/P, and attended by nearby Hams and some from Perth, notably GAB and 6PH. Many contacts were made, but I will leave this to an abler pen than mine to describe elsewhere.

GLF at Carnarvon is doing his share to keep the lower bands in use. Since he received his call sign during the month he is heard on 80 mxx and 40 mxx most days and is collecting quite

DX'ers will have to look out for 6WS who now has a permit to use a Panda tx and is a past master at tuning it. Congratulations to our G.O.M. Skipper.

LOW NOISE XTAL CONVS. 144 Mc.
Repairs to and construction of Receiv-
ers, Transmitters and Test Equipment.
T.V. alignment.

ECCLESTON ELECTRONICS

146a Cotham Road, Kew, Vic. WY 3777

6KO was absent from the meeting. Our spies tell us he got his hand out of phase with the sledge hammer and at present it is in an "unvented enclosure." Bad luck Herb. We hope it is better soon. What a pity "Dobba Baba" is not down there to "succour and defend." 6KJ is in business again, mobile with a transistor power supply, so we hope to hear him soon. That is if he can stop watching Adelaide T.v. on the side of his beam in Albany.

6978 has been heard lately trying to untangle himself from his "spider web" sorry, "spider web" sorry, "spider web" sorry. He has been named soon Pat. Cien 6C9W has been heard occasionally, but not so often since he found that "one-eyed monster." Often 6G2 on 6000 has been heard. A few 6AG have been in dock lately, caused by trying to use up some stray "eggs" on the wood-beehive or something. 6G2 has been heard a few times, spare "eggs" in the shack. Bob 6B3E has been having his troubles since moving to his new home. He has been heard a few times. Probably under the new carpet Bob. Of course he has had plenty of sympathy and advice from 6H4 and 6G2. 6G2 is making a lot of noise on his "titled" beam on the higher bands and occasionally on 80 mc. We hear that 6DX is or has been in hospital at Exeter.

Well that is about all the information I have from my spies this month, so h.c.n.u. 13, 52CK per CIA.

TASMANIA

Old-timers will be sorry to learn of the death of Keith ex-VK7KV, who died early in October. Keith was famous for having worked Egypt on the 180 metre band pre-war.

The Hobbies Exhibition at the City Hall, early in Sept., passed off very satisfactorily indeed, and many contacts, both on v.h.f. and h.f. bands were made. We are delighted with the response from Amateurs throughout Australia who made this side of our exhibit so attractive. All helpers are hereby publicly thanked by the Divisional Council for their invaluable contributions.

The fox hunt, conducted on 3515 kc. and on the 144 Mc. band, on 23rd Sept. on behalf of the fund for our projected clubrooms, cleared £4/10/0. Attendance from the v.h.f. boys was really excellent, but the attendance from the h.f. boys was rather disappointing. We all had a wonderful time, followed by excellent supper at the residence of VZBE, with the favourite meats cooked over an open fire and coffee made out of milk, delicious it was too.

At the time of writing, the phone section of the VK/ZL Contest has passed, and conditions in the south were most disappointing. Severe sunspot activity made all bands largely useless during the entire 34 hours.

The October meeting of the Division was favoured by an excellent address from Joe TBJ on the basic design of transmitters. Joe again demonstrated his wonderful knowledge of a subject like this and his remarks upon the pi-coupler in particular were most interesting and informed. The business part of the meet-

ing was the interest experienced for many months. The interest was caused by the VKI Division's desire to conduct a concurrent contest with the R.D. Contest for equal participation. This topic brought into the open the whole subject of the R.D. Contest. Opinions were many and varied, but I feel we all have a better conception of the problems involved as a result of this discussion.

Keith TRX is passing through a most anxious time at present, with the serious illness of his XYL. We wish Mrs. Johnson a speedy recovery to full health.

Snowy TCH will soon be on during the week-ends on the yacht Moorina, so keep an ear on 3515 Kc. over the week-ends and see whether Snowy is out on the blue.

We have lost the Photographic Club as our tenant in our clubrooms. The loss of income will make a difference to our Institute's finances as from now on, so we can but hope that a new tenant can be found to take their place. 73. 722.

NORTH WESTERN ZONE

Ken ZKH took the chair for the first time at our October meeting and skillfully handled a lively discussion. Only eight turned up, which was really a poor show. Those present were ZKH, ZMS, ZSF, ZKL, ZJAA, ZMX and associates Geoff and Alan. Such a bunch of enthusiasts. It was decided to hold a film evening for the social evening in November. This may attract a better roll up. The rag chew session was very interesting.

The exhibition to be held at Devonport has been put forward to November 23, 24 and 25.

So we have more time to prepare. Has anyone the radiation pattern of a full wave vertical on 80 mx? Associate Bob is suspending a gas-filled balloon 250 feet above the hall and will include a vertical wire for an antenna. So look out chaps.

Several locals will have participated in the Jamboree on the Air by the time this is read. Sid TSF has instituted a container service for the transport of disposal gear from the mainland. Could grow into a charter. George TXL is starting to converse in monkey chatter, so anticipate s.s.b. coming from that quarter one day.

Some peculiar effects have been noticed as a result of magnetic disturbances lately. I had to ask a VK3 to relay to TKH (about 30 miles away) the other night. Some good signals have been heard on 20 mc so can see Sam TKM giving a hint. The 1500 kc broadcast from Hobart on Sunday morning was very good, but possible or difficult here lately, both on 40 and 80 mc. The bands appear to be bad early in the mornings. Wonder if the powers that be could give us a land line; doubtful perhaps? The line to Hobart has been very good lately. Possibly salt build-up on the insulators near the sea. Like the farmers, we need a good rain.

Was staggered to learn that my notes were awaited with anticipation, from XYLs. My heartfelt thanks to Sweet Buttercup for her encouragement. News is scarce this month, so the old scribe will have to sign off. 75, IMX.

HAMADS

Minimum 5/-, for thirty words.

Extra words, 2d. each.

Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received at P.O. Box 36, East Melbourne, C.E. Vic., by 8th of the month, and remittance should accompany the advertisement. Call signs are now permitted in Hamads. Dealers' advertisements not accepted in this column.

FOR SALE: C.R.O. 3" screen, commercial job. All controls, inputs, u.h.f., etc. Pos. and neg. triggering, vert. atten. and amp. Wide hor. sweep, variable e.h.t., beautifully made, excellent performer. Amer. octal base valves, £35. O'Brien, C/o P.O. San Remo, Vic.

FOR SALE: Drake Model 2A complete with Model 2AQ, Q Multiplier. Perfect, factory new, just arrived. Wife going Melb., no delivery problem. Sensible cash offer. Harwood, Eighth Ave., Armadale, West. Australia.

F86 For Sale, with power supply, £7.
Phone 34-9491. Melbourne.

SELL: AMR200 Receiver with power supply and speaker. Not in working order. Suitable for re-building. £15. Week-ends only please. 46 Elphinstone St., Footscray West, W.12, Vic.

SELL: BC453-454, modified for double conversion, suitable as tunable i.f. for converters. AR77E Communications Rx in good condition, excellent performers. Apply VK2WS.

WANTED: Curtiss Propellor Pitch-change Motor and Gearbox complete. Must be unmodified. Price, etc., to VK5OC, Old Belair Rd., Belair, phone 78-2401.

WANTED: Type 3 in good order.
VK3AUK. Bob Kidgell. Phone 27-3202.

WANTED TO BUY: Complete medium powered 10-80 metre phone transmitter with power supply, amateur band receiver and suitable frequency measuring equipment. Particulars to H. T. Swanton, 16 Karma Ave., East Malvern, Vic.

CRYSTALS ALL THESE FREQUENCIES £1 EACH

MULTIMETER Model 200H

20,000 ohms per v. d.c. 10,000 ohms per v. a.c.



Specifications:
D.c. volts: 0-5, 25, 50, 250, 500, 2,500, 5,000, 10,000, 100,000, 1,000,000.
A.c. volts: 0-10, 50, 100, 500, 1,000, 5,000, 10,000, 100,000, 1,000,000.
D.c. current: 0-50 μ A; 25, 250 mA.
Resistance: 0-20K ohms; 0-4 meg.
Capacity: 0.01-0.3 μ F. (at a.c. 50v.).
0.0001-0.01 μ F. (at a.c. 250v.).
Decibel: minus 20 db. plus 22 db.
Output range: 0-10, 50, 100, 500, and 1,000.
Battery used: UM3 1.5v. 1 piece.
Dimensions: 3 1/4 x 4 1/8 in.

Complete with internal battery, testing leads and probes.

Price £5/12/6 inc. tax.

1155 GENEMOTORS TYPE 34A

Input 9.3v., output 225v. at 110 mA.
Complete with relays and filters, in case. Weight 30 lbs. 19/6 each.
5/- handling charge.

RECORDING TAPE

TMK "Syncrotype" 7" Rolls, PL-12 (Standard) £1/16/6
TMK "Syncrotype" 7" Rolls AC-18 (Long Play) £2/10/6

AMERICAN POTENTIOMETERS

American Bradley, 2" long, 1" shaft, 1" diam. Available in following sizes: 20,000, 25,000, 30,000, 50,000, 100,000, 250,000 ohms, and 2 megohms.

Price 2/6 each.

SPECIALS!! SPECIALS!!

U.S.A. Ampenol Coaxial Flets, 5/- ea.
Morse Key and Buzzer Sets, new, 12/6
SCR522 28v. Genemotor power supply, 20/-, 5/- packing fee.

English Filter Chokes, 40 mA., 100 ohm resistance 3/6 each

Carbon Mike Transformers, small, new, 5/- each

Vibrators, Oak/M.S.P. 6v. synchronous 7-pin AV5211R £1 each

HOOK-UP WIRE

P.V.C. insulation, 0.028. Red or white. 100 yd. Rolls, 10/- Roll.

8 Mc. MINIATURE CRYSTALS

Band-edge market Miniature Crystal and socket, £2.

CRYSTALS ALL THESE FREQUENCIES £2 EACH

3.5 Mc. Ham Band:	50 Mc. Ham Band:	144 Mc. Ham Band:	(continued):
DC 3515 FT 3535	DC 8333.3 = 50 Mc.	DC 8016 DC 8022.5	DC 8029.5
DC 3535 DC 3560	DC 8333.3 = 50.3 Mc.	DC 8016.5 DC 8023	DC 8030
DC 3536 DC 3562	DC 8400 = 50.4 Mc.	DC 8017 DC 8023.5	DC 8030.5
DC 3537 FT 3564	DC 8416 = 50.5 Mc.	DC 8017.5 DC 8024	DC 8031
DC 3534 FT 3573	DC 8450 = 50.7 Mc.	DC 8018 DC 8024.5	DC 8031.5
DC 3547 FT 3575	DC 8483 = 50.9 Mc.	DC 8018.5 DC 8025	DC 8032
DC 3549 FT 3580	DC 8500 = 51 Mc.	DC 8019 DC 8025.5	DC 8032.5
DC 3552 FT 3587		DC 8019.5 DC 8026	DC 8033
DC 3552 FT 3595		DC 8020 DC 8026.5	DC 8033.5
		DC 8020.5 DC 8027	DC 8034
		DC 8021 DC 8027.5	DC 8034.5
		DC 8021.5 DC 8028	DC 8035
		DC 8022 DC 8028.5	DC 8035.5
		DC 8022.5 DC 8029	

7 Mc. Ham Band:

Crystals of any frequency, £2.

SAKURA CIRCUIT TESTER

Model TR-6S

Sensitivity: d.c. 20,000 ohms/volt, a.c. 10,000 ohms/volt. Ranges—d.c. volts: 6, 30, 120, 600, 1,200v.; a.c. volts: 6, 30, 120, 600, 1,200v. D.c. current: 60 μ A., 6 mA., 60 mA., 600 mA. Resistance: 10K, 100K, 1M, 10M ohms. Capacitance: 0.001-0.2 μ F., 0.0001-0.01 μ F. Inductance: 30-3,000H. Decibels: -20 to +12 db (0 db = -0.775v. -600 ohms). Dimensions: 4 1/2" x 6 1/2" x 2 1/2". Weight: 1.3 lbs.

Price £9/10/0 inc. tax.

VALVE SOCKETS

7-pin Miniature Valve Sockets and Shields. New, 15 for £1.

9-pin Valve Sockets, McMurdo, 9d. ea.

Octal Valve Sockets 1/6 each

ECKO NO. 88 TRANSCEIVER

Portable, xtal locked 4 channel, 40 to 43 Mc., 14 valves, 1L4, 1T4, 3A4, etc., 12v. 3a. input power supply. Less crystals, mike and headphones, etc.

To Clear, £6/10/6 each

BELDEN RUBBER COV. FLEX

Single, 1/32 inch synthetic insulation. 1,000 ft. reel, 50/-, Weight approx. 5 lb.

GENEMOTORS

Command Receiver Genemotors, 28v. input, 250v. 60 mA. output, new, 25/-

V.H.F. RECEIVERS

Type R99/ARN-5A. 300 Mc. Valves: seven 6AJ5s, two 12SN7s, one 12SR7, one 28D7, six relays, and three crystals of 6522.9 Kc. As new. £5 each.

HAM RADIO SUPPLIERS

5A MELVILLE STREET, HAWTHORN, VICTORIA

Phone 86-6465

Money Orders and Postal Notes payable Nth. Hawthorn P.O. 5/- Packing Charge

Pick the Person

WHO HAS A *Super* RADIOTRON PICTURE TUBE



The occupant of Apartment 16 is like most other people when it comes to watching a march, and yet his window remains shuttered, even while the marchers pass directly below.

The answer is a simple one—his TV set is powered by a **SUPER RADIOTRON** picture tube and, like other fortunate owners, he prefers to watch his marches from the comfort of a favourite easy chair.

For all the advantages of "on-the-spot" viewing plus razor-sharp focus, insist that your picture tube replacements are **SUPER RADIOTRON**.

Made in Australia by

AMALGAMATED WIRELESS VALVE CO. PTY. LTD., Sydney, Melbourne, Brisbane